



INVESTIGATING THE RELATIONSHIP BETWEEN PAY DISPARITY AND ORGANISATIONAL PERFORMANCE

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Signed

Signed by candidate

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Abstract

Background. Globally, executive remuneration or compensation (the terms are used interchangeably) has increasingly come under public scrutiny over the past few years, prompting stricter executive remuneration reporting standards for listed organisations. However, despite fair pay regulations meant to address the large disparity in income between executives and employees lower down in the organisational hierarchy, executives continue to earn many more times than the average employee – as much as 300 times more (BusinessTech, 2020).

Aim of the study. The aim of the present study was to investigate the relationship between pay disparity and organisational performance.

Method. An exploratory research design was utilised for the purposes of the present study. Using purposive non-probability or judgement sampling, a sample of corporate organisations (n=185) that are listed on the Johannesburg Stock Exchange (JSE) were identified. Secondary quantitative data were collected from each of the organisation's publicly available Integrated Financial Statements.

To investigate the relationship between pay disparity and selected organisational accounting performance measures (incl. EBITDA, ROI, ROA, EVA and Price/EBITDA), Pearson Product Moment correlation analyses, followed by multiple regression analyses, were conducted.

Results. A significant positive relationship was found between pay disparity and organisational performance, as measured by EBITDA. This relationship was investigated within the various sectors of the JSE, and it was found that the telecommunications sector had the strongest significant positive relationship between pay disparity and organisational performance. In several sectors, including healthcare, energy and technology, evidence of a significant relationship between the two variables was not found.

Contribution. Scholars are divided on the effects pay disparity (i.e., the difference between executive remuneration and that of the average employee) has on organisation performance. Some authors, most often using tournament theory, argue there is a positive relationship between pay disparity and organisational performance. In support of this notion, several studies have found a significant positive relationship between pay disparity and organisational

accounting performance measures. However, several studies have reported a significant negative relationship between pay disparity and organisational accounting performance measures. Authors that hold this view most often use equity theory to substantiate their arguments.

The latter relationship is hypothesised to be true in the current study amongst South African organisations listed on the JSE. South Africa has some of the highest rates of inequality in the world, as well as some of the largest pay gap ratios in its organisations. Studies show that employees may foster negative attitudes towards their work when they feel they are not being remunerated fairly compared to their superiors.

The findings of the present study hopefully provided new insights on the possible behavioural implications of pay disparity within organisations.

Keywords

Pay Disparity, Executive Compensation, Pay Gap Ratio

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CHAPTER 1

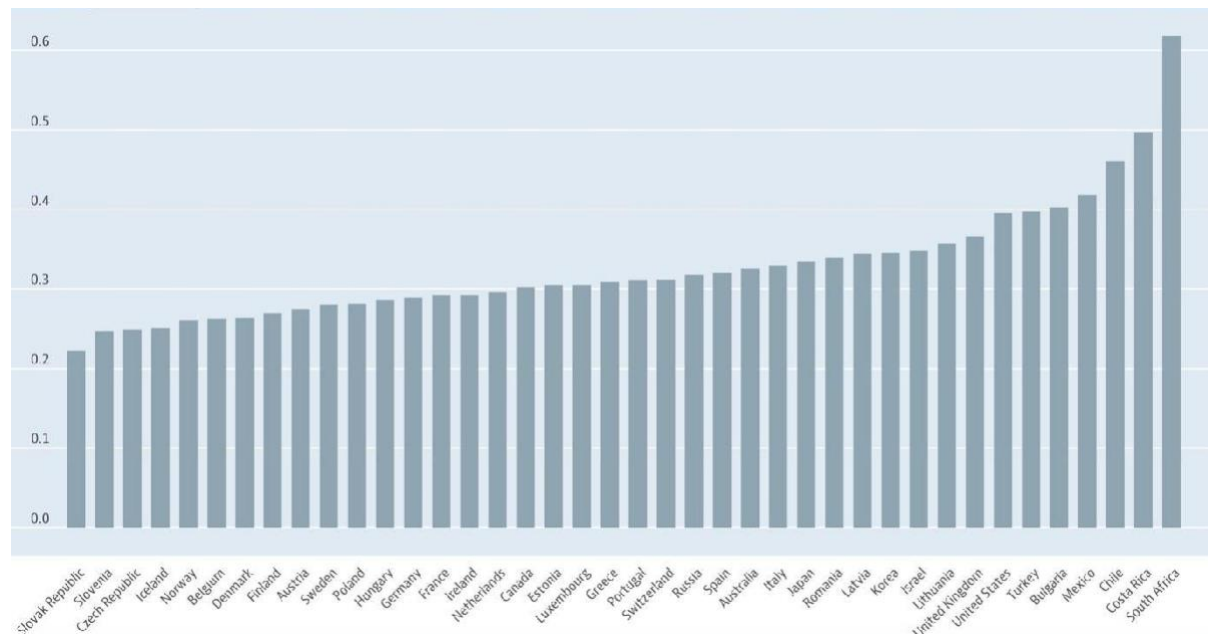
INTRODUCTION

Executive remuneration or compensation (the terms are used interchangeably here) has increasingly come under public and academic scrutiny, especially after the global financial crisis in 2008, for which banking executives were largely blamed (Rouen, 2018). Though a global phenomenon, South African public and private organisations are no exception to this scrutiny. Several articles have appeared in the popular press reporting on corporate executives and those leading parastatals earning exorbitant salaries and bonuses, while their organisations perform well below expectations - even losing value for their shareholders over the period they received large bonuses for.

Currently, executive remuneration amongst the top 10 corporate South African organisations listed on the Johannesburg Stock Exchange (JSE) averages R24,1 million (BusinessTech, 2021). Between 1997 and 2006, the remuneration of South African executives increased, on average, by 9.8%, which is well above annual inflation that averaged 4.5% over the same period (Fin24, 2018). Similarly, between 2019 and 2020, average executive remuneration increased by 7.09%, compared to the average increase in salaries paid to employees being around 4.5% over the same period (Business Insider, 2020). However, the levels of remuneration received by corporate executives in South Africa, both in quantum and relativity to the general employee population, stands in stark contrast to the already high and continually rising rates of unemployment, poverty, and socio-economic inequality that plagues the country. The latest OECD (2022) Income Inequality Indicator indicates South Africa as having the highest level of income inequality amongst the countries reported (See Figure 1.1 below).

Figure 1.1:

OECD (2022) Income Inequality Indicator



Source: <https://data.oecd.org/inequality/income-inequality.htm>

On the one hand, South Africa has some of the highest rates of poverty, socio-economic and income inequality in the world, while on the other, finding some of the highest levels of pay disparity within South African corporate and public organisations (i.e. the difference between the remuneration paid to executives and the average salary of employees in an organisation), has made this a contentious issue that has been debated at many levels and within a wide range for forums. Several authors, commenting on this matter, have gone as far as to question the morality and ethics of paying executives exorbitant salaries when so many South Africans live in adverse poverty.

Pay disparity became headline news when the high levels of pay disparity between mine executives and the miners was blamed as one of the key factors that led to, what the press dubbed the 'Marikana Massacre'. In 2012, thirty-four Lonmin mine workers tragically lost their lives, and an additional 78 miners were injured while striking for an annual income of R150,000. This while the annual salary of Lonmin executives was R20m at the time (Alexander, 2014; Boëttger & Rathbone, 2016).

Events such as the Wall Street scandal, as well as that which transpired at Marikana in South Africa, have resulted in a global outcry against organisations paying exorbitant remuneration packages to executives, while many employees earn many times less – while some employees not even receiving minimum wages. As a result, to address this issue, several countries have implemented fair pay regulations, guidelines for good governance, and often increasingly impose stricter executive remuneration reporting standards for listed organisations.

In line with the global trend described above, following the end of Apartheid in 1994, the South African government adopted various pieces of legislation aimed at reducing the disproportionate level of remuneration received by corporate executives and employees at the lower levels of the organisational hierarchy, as well as facilitating redress for the inequalities of the past and which have perpetuated the existing high levels of pay disparity. These regulations and guidelines include, most notably, the Employment Equity Act (Act No. 55 of 1998) and the King Report on Corporate Governance for South Africa (Bezuidenhout et al., 2018). The Institute of Directors in Southern Africa (IoDSA) and the King Committee released the latest version of the King code, i.e., the King IV™ report on Corporate Governance for South Africa, on the 1st of November 2016. King IV™ has made it compulsory that organisations be more transparent regarding executive remuneration in their annual integrated reports.

Moreover, regulations made under South African law promulgated in 2011, all listed entities in South Africa are required to comply with the International Financial Reporting Standards (IFRS). For other organisations, depending on an entity's 'public interest score, either the IFRS for SMEs or South African Statements of Generally Accepted Accounting Practice (SA GAAP) need to be complied with. Public organisations, in their annual integrated reports, have to include a remuneration report that, in line with the principles of King IV™ and the JSE listings requirements, comprises at least 1) a background statement; 2) a remuneration policy that provides context on remuneration decisions and considerations taken during the year; and 3) an implementation report that discusses the implementation of the remuneration policy during the current year. Additionally, King IV™ put measures in place for shareholders to have a 'say-on-pay,' which ensures that organisations do not pay executives more than they are worth in terms of the value they add to an organisation.

As intended, the measures described above have brought about higher standards of corporate governance and addressing fair pay principles, with corporate executives and Remuneration

and Corporate Governance Committees (REMCOs) increasingly being held accountable for remuneration decisions that they make by shareholders and shareholder advocacy groups. It is expected that the requirements of the King Code will become only stricter and more comprehensive in this regard in its next iteration (Dr Mark Bussin, personal communication, 26 October 2021; Dr Bussin chairs the sub-committee responsible for the remuneration section of the King Code).

Several authors (for example, Bussin, 2015; Rouen, 2018) argue that high levels of pay disparity erode employee levels of perceived organisational justice and often result in higher levels of perceived unfairness and inequality amongst employees. Such negative employee attitudes, in turn, are likely to result in lower levels of employee motivation, disengagement, organisation citizenship behaviours (OCBs), productivity, willingness to work, while resulting in higher levels of counterproductive workplace behaviours (CWBs), which, ultimately, result in lower levels of individual and organisational performance (Rouen, 2018).

These authors further argue that when pay disparity is perceived to be low, employees are more likely to hold positive attitudes towards managers and leaders and feel they are being treated fairly/equitably (Rouen, 2018). Positive employee perceptions of organisational justice are known to lead to employees having higher levels of trust in the leadership of the organisation, which are related to higher levels of perceived employee engagement, job satisfaction, affective commitment, which, as suggested above, result in more organisational citizenship behaviours that, ultimately, result in higher levels of individual and organisational performance, the creation of shareholder value and sustainable organisational success. Using such arguments, the authors holding these views believe that there is a statistically significant negative relationship between pay disparity and organisational performance. On the other hand, several authors defend why executives should be paid exponentially more than their employees and, by assumption, hold a view that there is a positive relationship between pay disparity and organisational performance (Bussin, 2015; Rouen, 2018).

Contradictory to the views shared above, the group of authors who argue a positive relationship between pay disparity and organisational performance use various theories, such as tournament theory, agency theory, marginal productivity theory, structural theory, and human capital theory, to substantiate their hypothesis of a positive relationship (Goldstein, 2012). Most often, they would also use equity theory as the basis for their arguments, as it centres on determining whether the distribution of resources is fair to all parties involved. Irrespective of the direction,

there are compelling arguments for the existence of the relationship. More research into the direction of the relationship needs to, therefore, be conducted to better understand this phenomenon.

Furthermore, it is important to note that not all sectors of the economy, on average, experience similar levels of pay disparity, which challenges the current one-size-fits-all understanding of the relationship between pay disparity and organisational performance. In knowledge-intensive sectors of the economy/industries, for example, the financial services sector, it is not uncommon for employees to earn salaries close to that of executives - sometimes even earning more than them when performance bonuses and sales incentives are considered. In contrast, in labour-intensive sectors of the economy/industries where so-called 'blue collar' workers, for example, in manufacturing and mining, large levels of pay disparity is common. It is, therefore, argued here that pay disparity should be thought of as being industry or sector-specific – a notion which has not been considered in recent literature and was thus included in the scope of the present study.

Further to the above, research studies into executive pay have most often focused on the relationship between Chief Executive Officer (CEO) pay and organisational accounting performance measures. Moreover, it was noted that research studies into executive remuneration have, almost exclusively, focused on the CEO's pay (i.e., the individual) and not considered the average of the collective remuneration received by all individuals on the executive team (i.e., the so-called C-suite and/or directors) taken together. This is something that the current study set out to address and was included in its design.

Literature on pay disparity (i.e., the difference between executive remuneration and that of the average employee) is limited. Where literature could be found that focused on this relationship, it reported on research studies that were conducted in the context of the global North, i.e., in developed economies such as America, Europe and China (Rouen, 2018). Due to, generally speaking, the limited nature of literature on pay disparity, as well as a dearth of studies conducted within developing economies, there has been a call by several authors for further theory development and improved measures of pay disparity and organisational performance (for example, Rouen, 2018 and Urson, 2016). Locally, despite South African organisations having some of the highest levels of pay disparity in the world, the topic of pay disparity has not yet been explored in the South African context at all.

Finally, Deysel and Kruger (2015) noted that the scrutiny of executive remuneration is largely fuelled by emotionally charged over-generalisations that is not often based on fact. The current research study was an attempt to allow us to better understand this phenomenon within the South African context and by collecting ‘the facts’ regarding pay disparity in South Africa, and so bring rigour and further insight into the executive pay discourse. It is further hoped that the present research study will provide remuneration practitioners and remuneration committees who are responsible for setting pay an additional defensible justification as to why pay disparity needs to be reduced or kept to reasonable levels.

The aim of the current study was, therefore, to investigate the relationship between pay disparity (i.e., the difference between executive remuneration and that of the average employee) and organisational accounting performance measures (incl. ROA, gross profit, ROI, Price-to-EBITDA, EBITDA, and EVA). Moreover, this relationship was further investigated by industry and sector type to find support for the notion suggested here, i.e., that the strength of the relationship between pay disparity and organisational accounting performance measures differs across various industries/sectors of the economy.

It is hoped that this research study will positively contribute to the various aspects raised in discussing the rationale for the present research study above, and most notably, by adding to the current literature on pay disparity as a whole, as well as addressing an important yet glaring gap in South African literature. This current study will also hopefully also contribute to answering a key question in this field of study: “Will larger pay disparity result in either tournament performance or equity behaviour?” Lastly, it is hoped that this research study will provide an impetus for future studies in this field, given its relevance and importance.

Problem Statement

In South Africa, corporate executives and those who head up parastatals typically earn exponentially more than the average South African employee, a situation that has contributed to South Africa being one of the countries with the highest levels of income inequality in the world (OECD, 2022). It is, therefore, important for both academics and practitioners alike to better understand the relationship between pay disparity (i.e., the difference between the remuneration of executives and that of the average employee) and organisational performance

in order to understand the impact of pay disparity on organisations and, more importantly, to be able to put measures in place to address and even rectify this situation where needed.

Perceptions of being paid fairly/equitably are key to employees feeling motivated, engaged, committed, and performing at the desired levels and, ultimately, is key to individual and organisational performance and sustained success. Conversely, large levels of pay disparity are argued to be detrimental to individual and organisational performance, as employees may foster feelings of unfairness and become demotivated, resulting in lower levels of employee productivity. Although being highly relevant, little research evidence of this relationship, however, exists, especially within the developing economy context. No such study could be found that has been conducted in South Africa, and it is hoped that the present study will address this important gap in the literature.

The aim of the current study was, therefore, to investigate the relationship between pay disparity (i.e., the difference between the average remuneration received by the executive team and the average remuneration of employees) and organisational accounting performance measures (incl. ROA, gross profit, ROI, Price-to-EBITDA, EBITDA, and EVA). Moreover, the relationship between pay disparity and organisational accounting performance was further investigated by industry and sector type to find support for the notion that it is more pronounced in certain industries/sectors of the economy than others.

As stated above, it is hoped that the present research study will address a gap in the current literature, being the first such study to be conducted in South Africa and one of only a handful of studies mostly conducted in the developing economies of the Global North. Hopefully, this paper will further elucidate the need for ensuring fair pay policies and practices in corporate organisations.

Research Objectives

As described above, the current research study was an attempt to provide for the conceptual and empirical groundwork that would hopefully contribute to our better understanding of the relationship between pay disparity and organisational performance, which could possibly inform policy and practice in this regard. To achieve this aim, the following theoretical and empirical objectives were formulated.

Theoretical objectives

Firstly, to achieve the aim of the current research study, as stated above, a review of the current literature on executive pay, remuneration policies, structures and practices, ethical pay and remuneration governance and disclosure, found both within the global and South African context, had to be conducted. Existing literature on various organisational account performance measures needed to also be reviewed to be able to select the most appropriate measures that could be used for the purposes of the present research study.

Empirical objectives

To obtain appropriate empirically based insights into the research question at hand:

- we needed to design a research study that will allow us to collect, collate, clean and analyse data in such a manner as to reduce biases and ensure the external and internal validity of the study;
- it was decided that, for the purposes of the present research study, publicly available secondary data on executive remuneration, organisational performance accounting measures, and the data required to calculate the mean/median employee salary (i.e. total salary budget and the total number of employees) be collected from selected JSE listed corporate organisations;
- That the data be analysed using appropriate statistical techniques to estimate the relationships between pay disparity and organisational accounting performance; and
- using appropriate statistical techniques, analyse the data to detect differences in the strength of the relationship within different sectors of the economy.

Structure of the Dissertation

The mini dissertation comprises five chapters. In Chapter 1, the context/background of the research initiating question, the rationale for the research study, and research objectives are described. Chapter 2 provides an overview of current literature on pay disparity, as well as critically evaluates research on pay disparity and its relationship to performance, is provided. In Chapter 3, details on the method that was utilised to undertake the current study are described, as well as a summary of the realised sample, a discussion of the calculations used to estimate the variables under investigation, and the statistical analysis utilised. Chapter 4 provides a synopsis of the results that were obtained and reports on the statistical analyses that were conducted to estimate the relationship between pay disparity and organisational performance. Finally, Chapter 5 provides a discussion of the results and how they relate to current literature in this field of study. Additionally, the limitations of the current research study, recommendations for future research and finally, a description of the current study's theoretical and practical contributions are provided.

Conclusion

This chapter has outlined the importance of understanding the possible implications of pay disparity on organisational performance, especially after executive pay has come under immense scrutiny for being exceedingly high. Furthermore, this chapter established that motivation plays an integral part in employee performance. When employee motivation is increased, employees are likely to perform better, as suggested by tournament theory. Contrastingly, as proposed by equity theory, when employee motivation is hindered, employee performance will most likely decrease. This current paper aims to establish the relationship between pay disparity and organisational performance amongst JSE listed organisations, which will hopefully highlight the importance of closing the growing gap between executives and the average employee in South Africa and its potential negative effects on both employees and organisations.

The purpose of the present research study was not to condemn remuneration managers or REMCOMs who set executive pay but rather to help them better understand the impact large pay disparities may have on employees and, ultimately, the performance of organisations.

CHAPTER 2

LITERATURE REVIEW

Corporate executives and even those who lead parastatals in South Africa continue to earn disproportionately high salaries compared to the average employee. This raises the question, “Is there a relationship between pay disparity and organisational performance? And if so, why, and what is the impact of large pay disparity on individual and organisational performance, the creation of shareholder value, and the sustainable success of organisations?”

Based on a discussion of the background and context of the research initiating question provided in Chapter 1, the aim of the current study was to investigate the relationship between pay disparity (i.e., the difference between the average remuneration received by the executive team and the average remuneration of employees) and organisational accounting performance measures (incl. ROA, gross profit, ROI, Price-to-EBITDA, EBITDA, and EVA). Moreover, this relationship was further investigated by industry and sector type to find support for the notion suggested here, i.e., that the strength of the relationship between pay disparity and organisational accounting performance measures differs across various industries/sectors of the economy.

To address the aim of the current research study, as described above, a literature review was conducted into the selected constructs under investigation, as well as several aspects related to them, which includes the psychology of pay; remuneration strategy, policies, and practices; remuneration governance; horizontal and vertical pay disparity; and organisational accounting performance measures. Furthermore, Tournament Theory and Equity Theory were identified as appropriate theoretical frameworks that could be used to explain the relationship between pay disparity and organisational performance and are, therefore, also discussed in Chapter 2 in an effort to substantiate the hypothesised relationship between the two constructs under investigation.

The Psychology of Pay

Money is important to individuals as it is instrumental in satisfying their most pressing needs, for example, having access to food, water, a safe and secure home, the ability to take care of

their dependants, as well as experience personal fulfilment (Zeng et al., 2013). Money, however, provides one with much more than the opportunity to purchase the goods and services one requires to satisfy one's immediate physiological and psychological needs; in other words, it has much more to offer than just a purely economic function.

Money is also symbolic, and it can, for example, make one feel more 'valuable' and be an overt statement of one's status and prestige. Money is a tangible method of recognising an individual's worth and can, as a form of social approval, even improve one's self-esteem (Zeng et al., 2013). Some authors even argue that, within the organisational context, pay can be perceived as a signal of job-related competence and having more of it suggests that one is more competent than one's colleagues.

When used as an incentive, monetary rewards can also be key in achieving desired outcomes of levels of performance, providing a tangible 'prize' for achieving stretch goals or targets. Economic agency theory (Jensen & Meckling, 1976) has traditionally supported the use of remuneration to promote levels of employee motivation and performance. Economic agency suggests that if the remuneration system provides employees with more pay when their behaviours support the achievement of the organisation's goals and objectives, the employees will be motivated to behave in those ways again.

More recently, it was found in several neuroscientific experiments that money can act like a drug, stimulating areas of the brain associated with immediate gratification. As a result, it is becoming clear that it is possible for a person to develop an unhealthy dependency on cash and become addicted to money or wealth, much like some people are addicted to drugs and alcohol (Sherman, 2006; Wang & Krumhuber, 2017).

As suggested above, money plays an important role in meeting unmet physical and psychological needs and has so traditionally been used to affect levels of employee motivation and performance. Theories of motivation, which can help explain how money can motivate individuals to perform, is explained in detail below.

Theories of Motivation

Motivation is goal-directed behaviour and is often initiated when an individual recognises and is pulled or pushed to fulfil an unmet need (Hartmann & Slapničar, 2012). Authors suggest that

there are two categories or types of motivation, which are based on the source of where a motivator comes from 1) intrinsic motivation, which is self-generated in that individuals often seek work that satisfies them personally; and 2) extrinsic motivation, which is done to and for individuals to motivate them (Gerhart & Fang, 2015). There are, at least, four prominent motivation theories that make use of this notion of intrinsic and extrinsic motivation, namely: Maslow's hierarchy of needs, Lock and Latham's Goal setting theory, Reinforcement Theory and Vroom's Expectancy Theory. Each of these theories is briefly discussed below.

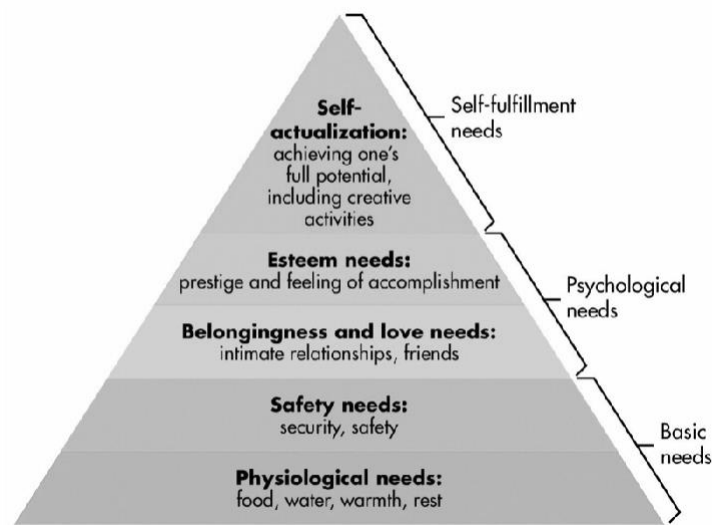
Maslow's Hierarchy of Needs

Arguably one of the most popular motivational theories amongst managers, Maslow's Hierarchy of needs proposes five levels of human needs that have to be met for an individual to feel fulfilled (Lester, 2013; Maslow, 1943). The five levels of human needs include 1) physiological needs, 2) safety needs, 3) belongingness and love needs, 4) esteem needs, and 5) self-actualisation (see Figure 2.1 below).

The five needs are placed hierarchically in a pyramid, indicating the order in which the needs should be fulfilled, starting from the bottom and working towards the top. Maslow postulated that without fulfilling a lower-level (i.e. more basic or lower-level) need, an individual could not progress to the next level need because of a lack of motivation to do so.

Figure 2.1

Maslow's Hierarchy of Needs



The first category of needs on Maslow's Hierarchy of Needs (Maslow, 1943) is *basic needs* and consists of two levels: 1) psychological needs and 2) safety needs, respectively.

- ***Physiological needs*** refer to the most basic material needs an individual requires to be able to survive (e.g., food, water, clothing). Translated to the workplace, employees need access to key services and opportunities to feel like their most basic of needs are being met. Remuneration allows individuals to, for example, buy food and pay for their rent/accommodation. Once employees have fulfilled this first-level need, they move up to the next level, which are safety-related needs (Maslow, 1943).
- ***Safety needs*** play a vital role in impacting overall employee satisfaction (Jerome, 2013). If an employee believes their job is secure and their family and houses are safe, they are more likely to be motivated than if they are not secure. As is the case with physiological needs, remuneration allows individuals to address their safety needs by buying a house in a good neighbourhood, allowing their children to attend good schools, make provisions for medical aid and pension costs. Once safety needs have been met, one focuses on their belongingness and love needs.

The second category of needs on Maslow's Hierarchy of Needs (Maslow, 1943) are *psychological needs*, which also consist of two levels: 1) esteem needs, and 2) belongingness and love needs, respectively.

- ***Belongingness*** is important in the organisation, as it may result in employees feeling more motivated and more engaged. Organisations are encouraged to host social events and more opportunities for relationship building (Lester, 2013). Furthermore, employees can be encouraged to form work relationships or engage in professional/profession networks to further create a sense that they belong. Once employees feel like they belong, they can focus on their esteem needs.
- ***Esteem needs*** is the need to feel accomplished in one's work and in life. It is important for employees to feel like they are growing or developing within the organisation and advancing to higher positions to meet their esteem needs (Jerome, 2013). Being recognised is also a fundamental human need. If employees receive positive feedback and recognition for their work, they are more likely to be motivated and perform better.

The third category of needs on Maslow's Hierarchy of Needs (Maslow, 1943) is *self-fulfilment* needs, which consist of one level, i.e., self-actualisation.

- ***Self-actualisation*** refers to maximising one's full potential in the workplace and in life. Employees want to feel like they are doing the best they can in their position. An employee that has their self-actualisation need met feel empowered and trusted, which encourages motivation (Lester, 2013).

Goal Setting-Theory

Lock and Latham's (1989) Goal Setting Theory postulates goal setting is essentially linked to one's performance in their work. It is argued that specific and challenging goals coupled with appropriate feedback lead to significantly higher levels of task performance (Lock & Latham, 2006).

There are five key principles of goal setting theory that ensure goals are motivational in nature and illicit greater performance, and they are that the goal must 1) be clear and concise; 2) be challenging; 3) that the individual must be committed to their goal; 4) the individual must receive feedback regarding their performance in relation to their goal; and 5) the goals should be complex (Lock & Latham, 1989). As an example, if employees decide they want, for example, a raise and intend to get this raise, they will set a specific relevant goal to achieve. By having a clear goal, employees are more likely to be motivated to behave in a way that will make achieving their goal possible. It is well-known in sport that setting goals/targets result in significantly higher levels of performance when compared to not having any goal. Lock and Latham (1989) further described the importance of intention guiding individual behaviour.

Reinforcement Theory

Skinner's (1935) Reinforcement theory postulates that individuals repeat those behaviours that are positively incentivised, reinforced, and/or result in them achieving a goal that is recognised. Reinforcement theory, therefore, proposes that through positive or negative consequences, individuals will either be incentivised or disincentivised, respectively. In organisations, reinforcement theory is used to align employee behaviour with the achievement of strategic objectives, in other words, encourage wanted behaviours and discourage unwanted behaviours (Wei & Yazdanifard, 2014). In doing so, employees will eventually become conditioned to perform wanted behaviours subconsciously.

There are four types of reinforcement used to illicit wanted behaviours, namely, 1) positive reinforcement, 2) avoidance, 3) punishment, and 4) extinction. These four types of reinforcement are discussed briefly below.

Positive Reinforcement

Positive reinforcement can explain the motivating effects of rewards (both financial and non-financial) on employee performance.

Positive reinforcement can use both extrinsic and intrinsic incentives and/or rewards to affirm or encourage desirable organisational behaviours or dissuade employees from showing such unwanted behaviour (Skinner, 1935). Within the organisational setting, examples of extrinsic rewards that are used to provide positive reinforcement include promotions, salary increases, additional time off work and bonuses. If, for example, employees come to work every day they are supposed to be at work, they will receive their salary at the end of the month. This will motivate them to come to work every day they are supposed to so that they may receive the salary they need to pay for their monthly expenses. Similarly, if employees perform well in their job, they receive a cash bonus at the end of the year. In turn, this will then motivate them to work just as hard, if not harder, the next year to receive another cash bonus (Wei & Yazdanifard, 2014).

On the other hand, intrinsic rewards that are used as positive reinforcement in organisations include intangible rewards, such as recognition and non-financial rewards.

Avoidance Reinforcement

Avoidance reinforcement, also known as negative reinforcement, is designed such that employees are less likely to engage in undesirable organisational behaviours within the workplace (Skinner, 1935). In organisations, managers do not necessarily need to punish employees *per se*; however, they can, by providing, for example, a negative performance appraisal, reduce the unwanted behaviours of employees and so bring about an improvement in an employee's performance. Managers can also reduce the benefits an employee receives by, for example, cutting an employee's pay by a certain percentage or not giving an employee

the same percentage annual salary increase that all other employees would receive, prompting the employee to adjust their behaviour.

Punishment

Punishment, a more extreme form of negative reinforcement, is used as a last resort and is discouraged by researchers (Wei & Yazdanifard, 2014). Punishment includes providing unwanted consequences for unwanted behaviour and could include a demotion or being suspended with no pay. (Skinner, 1935). According to Lussier and Achan (2016), punishment is the least effective method of motivation amongst employees, as it most often leads to low morale, disengagement, absenteeism, and productivity.

Extinction

Extinction occurs after the adequate reinforcement to perform certain behaviours in specific circumstances stops for some time, resulting in the behaviour of the individual becoming less and less prevalent (Skinner, 1935). An employee who, for example, continuously hands in their deliverables late and is reprimanded by his/her manager may argue with their manager or even bully them to the extent that there is, ultimately, no consequence for their tardiness. This could then create a cycle where an employee continues handing in deliverables late, being reprimanded with no consequence, and still repeating the behaviour. If the manager, for example, simply informs the employee that there has been some consequence, such as a written warning letter filed against the employee, a manager can, without any verbal threats or engagement in conflict, begin to break the cycle and in this way, extinction of unwanted behaviour is likely to occur (Lussier & Achan, 2016).

Vroom's Expectancy Theory

Positive reinforcement is the reinforcement method that best explains how pay itself is likely to motivate employees to perform. Arguably, Vroom's expectancy theory is the theory that explains the link between pay and motivation best (Lussier & Achan, 2016).

Vroom's (1964) expectancy theory postulates that for individuals to feel a heightened sense of motivation, they must 1) feel like they are able to change their behaviour, i.e., have confidence in their ability; 2) feel like when the behaviour is changed, there will be a positive reward or outcome; and 3) individuals should value the reward greatly to justify the change in behaviour (Baumann & Bonner, 2017). According to Vroom (1964), these behaviours are validated through execution, implying that there are behavioural implications to the theory.

Simply put, an employee has a range of behavioural possibilities to choose from in response based on the reward they will receive (Parijat & Bagga, 2014). These behaviours are appraised by the employee based on three criteria: 1) the probability that acting in a certain way will result in the successful execution of the behaviour and ultimately lead to the desired outcome (*expectance*); 2) the impact these behaviours will have on achieving the desired outcome (*instrumentality*), and lastly 3) deciding whether the outcome is worth the behaviours required to attain the reward, the value outstrips the effort in a cost/benefit comparison (*valence*).

Due to South Africa's high rates of unemployment, as well as, for example, the price hike in staple foods, one's job and the remuneration that comes with it is important to most employees for survival (Feder & Yu, 2020). Due to the nature of employee contracts, employees know that if they come to work and do what is required of them, they will receive their pay (expectancy). Furthermore, employees know if they work hard and behave in ways that increase their work performance, they are more likely to get paid more and avoid retrenchment, for example (instrumentality). Having sufficient financial means to survive is often an outcome that is worth coming to work and performing well for; thus, employees are motivated to do so (valence).

It is important for organisations to know how employees are motivated and the role money has in their motivation to perform well within their organisation, as explained by positive reinforcement and Vroom's expectancy theory. Organisations must then ensure that they have effective remuneration strategies, policies and practices in place that ensures fair pay for the work being done to effectively motivate their employees (Mahmud, Hidayah & Widhiastuti, 2018).

Drawing on seminal motivation theories, such as Vroom's Expectancy Theory (1964), Adams's Equity Theory (1965), and Lawler's Discrepancy Theory (1971) described above, rewards have, repeatedly, been found to be critical motivators that can be utilised to stimulate desirable employee behaviours and attitudes, including increased levels of commitment,

loyalty, job satisfaction, morale, engagement, retention, individual- and organisational-level performance, productivity, profitably, shareholder value and sustainable business success - while also discouraging undesirable behaviours and attitudes, such as disengagement, intention to quit, employee turnover, tardiness and absenteeism (De Gieter et al., 2008; Williams et al., 2006; Day et al., 2014; Gieter & Hofmans, 2015). Based on these notions and the evidence that support them, reward management became a key Human Resource Management (HRM) function.

Reward Management

Reward management is concerned with the formulation and implementation of reward strategies, policies and practices which aim to reward employees fairly, equitably and consistently in accordance with their contribution to the organisation (i.e. their value creation).

Reward management has over time evolved into what is called strategic reward management, i.e., having a clear and well-articulated reward strategy, strategic reward objectives, and an underlying reward philosophy (i.e., reward values and principles) that with other strategic HR functions effectively supports the formation of a bridge between business or corporate and HR strategy. Furthermore, the reward strategy and philosophy facilitate and direct desired reward behaviour, reward decisions, reward communication and reward systems within an organisation. Strategic reward management, therefore, aims to develop and implement the required reward policies, processes and practices which ensure that an organisation has skilled, competent, well-motivated and committed employees at its disposal and to direct their behaviour in service of the achievement of the business strategy.

Remuneration Strategies

In line with the empirical evidence that competitiveness and sustainable organisational success are supported by the proper alignment of business/corporate strategy, HR strategy and total reward, Lawler (1995) argued that remuneration strategies, policies, models and systems should be:

- designed and managed in a strategic manner to ensure that the organisation's values, goals, and culture, as well as challenges of competing with the global economy, are considered;
- related to legal and operational requirements, strategic documents, organisational policies and operational manuals of the organisation;
- vertically integrated, i.e. be designed and implemented in such a manner as to fully support the achievement of an organisation's strategic goals/objectives.

Remuneration strategies are effectively used to attract and retain high calibre talent, as well as motivate or engage employees by promoting and rewarding the 'right' behaviours (Armstrong & Murlis, 2007). Furthermore, an effective and strategically aligned remuneration strategy, policies, and practices motivate employees to focus on the right behaviours (i.e., those that lead to the achievement of strategic objectives), perform better and also will continue to improve their performance. Remuneration strategies are also effective in ensuring fair and equitable remuneration within and between organisations, in other words, ensuring vertical and horizontal equity pay (i.e., within the organisation), as well as ensuring external pay equity (i.e., paying market-related salaries). There are various theories, models and/or approaches organisations can use when deciding on a remuneration strategy, some of which are briefly discussed below.

Remuneration Policies

The South African Remuneration Committee Forum states that remuneration policies provide a set of guidelines for the implementation of reward strategies, as well as the design and management of reward processes. Furthermore, the 'how' and 'why' of pay is encouraged when deciding on how much individuals in the organisation get paid instead of simply 'how much' should they get paid. Remuneration policies often state the base salary level and salary range for each role within the organisation (Bussin, 2015). These policies also note under which conditions pay may rise (or even fall where appropriate), as well as the value of additional benefits and rewards that may be provided in each role. Additionally, remuneration policies assist in shareholder and stakeholder understanding of the remuneration framework, its underpinning philosophy, and how it is to align employee behaviour with organisations goals and objectives (Viviers, 2015).

Remuneration policies are encouraged to have the following elements: 1) a remuneration philosophy, which is the set of beliefs underpinning the remuneration strategy, 2) remuneration strategy and objectives, which is a declaration of intent that underpins the Human Resources and business strategy, 3) remuneration principles, which define the remuneration approach and provides a framework for rewarding employees, and 4) salient features, which include the rationale, award criteria eligibility criteria vesting periods, performance targets and the purpose of each component of remuneration (Armstrong & Murlis, 2007).

There are several components of rewards, the choice and quantum of which make up the ‘ideal remuneration mix’ when aligned to the remuneration strategy and policies. The components of remuneration are the tangible aspects of reward practice.

Components of Remuneration

The financial-based rewards offered to employees by organisations can be categorised into 1) compensation or financial rewards that have *instrumental value*; and 2) financial benefits or material rewards that have *tangible value*. The terms are further described as follows:

- **Compensation.** Cash payments are given to an employee by an employer in exchange for their time/energy/services. Compensation, as discussed further below, can either be fixed pay (i.e., a fixed or guaranteed salary/wage, which means the amount can be expected) or variable pay (i.e., discretionary payments that may or may not be paid out, such as performance-linked bonuses).
- **Financial Benefits.** Programmes and structures provided by an organisation to supplement remuneration. Financially based benefits are typically used to mitigate future risk (e.g., provision of life insurance, medical aid, and pension).

The compensation (cash) aspect of remuneration further primarily consists of *fixed pay* and *variable pay* provided by an employer to an employee for services rendered. The terms are further described as follows:

- **Fixed pay or guaranteed pay** is the most common aspect of employment contracts and is the total amount of financial value an employee receives for their work by the organisation, i.e., an acceptable monetary or cash reward in return for the time, effort, and skill of an employee. Additionally, fixed pay includes other financial benefits, which also

include an organisational contribution to employees' retirement annuity and insured benefits. The salary paid to an employee, along with the benefits received, is the guaranteed package for the year. Fixed pay is usually determined by an organisation's reward philosophy and pay policy.

- **Variable pay**, on the other hand, is discretionary and is typically used to elicit and/or incentivise higher levels of performance from employees (e.g., the provision of performance-linked bonuses) or to disincentivise behaviour (e.g., reduce employee turnover by providing retention bonuses). A further description of variable pay elements is provided below.

Components of Variable Pay

As described above, variable pay is the payment of cash to employees in the form of performance pay or bonuses and is often referred to as 'pay at risk' give that it is awarded to employees for achieving specific targets or goals and, therefore, there is a risk of not being paid the bonus (Armstrong & Murlis, 2007; Bussin, 2015).

Variable pay has not been consolidated into the base or guaranteed pay, as consolidation assumes that past performance will continue in the future at the same level and should be rewarded with a permanent increase in pay (Armstrong & Murlis, 2007). There is, however, no guarantee that past performance predicts future performance and, therefore, variable pay is earned over a set period. Variable pay has always played a key role in remunerating executives, sales representatives, as well as others who receive pay-by-result forms of compensation, i.e., providing incentive bonuses related to achieved outcomes.

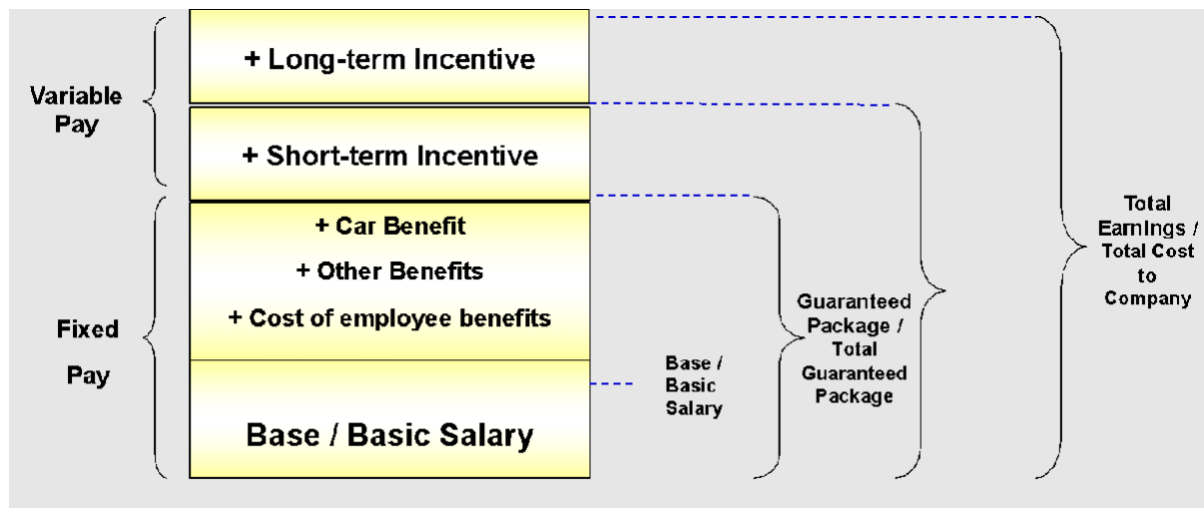
Variable pay can further be divided into short-term and long-term incentives, as described below:

- **Short-term Incentives.** Short-term incentives (STIs) are traditionally determined based on the annual performance outcomes, i.e., they are settled within 12 months of the period being reported. (SARA, 2012). STIs are typically paid in cash (e.g., performance-linked annual bonuses) but can also include share-based incentives (e.g., profit shares, gain shares).

- **Long-term Incentives.** Long-term incentives (LTIs) are much the same as STIs (i.e., cash performance awards linked to individual and/or organisational performance; deferred cash awards, or share-based incentives, qualified retirement plans, and stock bonus plans), with the important difference that they are settled more than 12 months after the relevant reporting period (SARA, 2020). LTIs are typically settled over a three (3) to five (5) year term.

The various components of financial reward or remuneration provided to employees discussed above are summarised in Figure 2.2 (see below).

Figure 2.2 *The Components of Financial Rewards*



Other types of remuneration or financial rewards also exist, which are offered to employees or prospective employees and include security benefits, special once-off payments such as retention bonuses (“golden handcuffs”), sign-on awards, and termination payments.

Impact of Incentive Scheme design on Pay Disparity.

Bussin (2015) suggested that pay disparity is mostly the result of incentive scheme design (both STIs and LTIs) that executives receive large remuneration packages, as incentives typically ‘hike-up’ executive remuneration levels – more so than guaranteed pay. This is evidence from the data provided below.

Table 2.1 (see below) summarises the extent of STIs currently earned by executives in South African corporate organisations as a percentage of the Annual Guaranteed Package (AGP).

Table 2.1:

Current Extent to which STI's are Earned by South African Executives

Latest STI market data

Strategic Level	Typical Title	Typical Paterson	Performance	Market STI Quanta - Annual - % of AGP			
				Lower Quartile	Median	Upper Quartile	90th Percentile
Top Management; Strategic Intent	Group CEO	F Upper	On-target	30%	60%	75%	200%
			Stretch	50%	78%	110%	500%
	CEO/MD; Subsidiary CEO/MD; Group Functional Director	F Lower	On-target	20%	33%	57%	75%
			Stretch	35%	56%	73%	180%
General Management; Strategic Execution	CEO/MD; Subsidiary CEO/MD; Functional Director	E Upper	On-target	15%	25%	45%	65%
			Stretch	25%	52%	65%	110%
Senior Management; Strategic Execution	Functional Director	E Lower	On-target	12%	20%	35%	55%
			Stretch	20%	40%	55%	75%
Middle Management; Qualified Professionals; Experienced Professionals	Manager	D	On-target	10%	15%	20%	40%
			Stretch	14%	35%	45%	60%
Advanced Operational; Skilled Technical; Academically Qualified; Junior Management	Supervisor, Foreman, Superintendent	C	On-target	5%	8%	12%	20%
			Stretch	10%	12%	20%	30%
Operational & Primary; Semi-skilled		B	On-target	5%	7%	10%	17%
			Stretch	7%	9%	15%	22%
Operational & Primary; Unskilled		A	On-target	5%	7%	10%	17%
			Stretch	7%	9%	15%	22%

Source: 21st Century Pay Solutions

As can be seen in Table 2.3, CEOs can typically earn anything between 60% to 500% of their AGP in STIs. Similarly, the LTIs executives receive can increase their remuneration packages exponentially.

Table 2.2 (see below) summarises the extent of LTIs currently earned by executives in South African corporate organisations, as expressed in appreciation shares multiples

Table 2.2*Current Extent to which LTI's are Earned by South African Executives*

			Appreciation Share Multiples				
Strategic Level	Typical Title	Paterson Grade	P10	P25	P50	P75	P90
Top Management; Strategic Intent	Group CEO	F Upper	0.92	2.69	8.12	17.90	30.86
	CEO/MD; Subsidiary CEO/MD; Group Functional Director	F Lower	0.55	2.37	5.76	12.60	21.40
General Management; Strategic Execution	CEO/MD; Subsidiary CEO/MD; Functional Director	E Upper	0.42	1.78	4.36	9.92	18.61
Senior Management; Strategic Execution	Functional Director	E Lower	0.33	1.43	3.49	7.69	15.77
Middle Management; Qualified Professionals; Experienced Professionals	Supervisor, Foreman, Superintendent	D	0.28	1.19	2.63	4.40	11.43
Advanced Operational; Skilled Technical; Academically Qualified; Junior Management		C	0.14	0.59	1.40	2.63	5.71
Operational & Primary; Semi and Unskilled		B, A	0.14	0.59	1.22	2.19	4.84

Source: 21st Century Pay Solutions

As can be seen in Table 2.4, CEOs can typically earn anything between 8 to 30 times their AGP in shares. Therefore, one cannot observe executive remuneration solely from the point of view of their basic salary when the STIs and LTIs that they receive drastically increase their remuneration package. Observing total executive remuneration (including STIs and LTIs) provides a clearer discrepancy in the difference between executive and average employee pay.

Pay Structures, Models and Design

Remuneration managers and REMCOMs use different combinations of the remuneration components to design pay structures for their organisations. Pay structures provide a framework for managing pay in a particular manner, which differs amongst organisations (Armstrong & Murlis, 2007). Pay structures are needed to provide logically designed frameworks within which an organisation's remuneration policy can be designed in such a manner to be fit-for-purpose and allow it to be implemented successfully (Merrimen, 2014).

An effective pay structure and design can provide an organisation with a competitive advantage.

Types of pay structure

The pay structure that organisations wish to use often depends on the nature of the organisation, as well as on the remuneration committee (Armstrong & Murlis, 2007). There are four main types of pay structures which are described below, namely 1) narrow-graded, 2) broad-banded, 3) career family and 4) job family.

Narrow-graded structures

Narrow-graded pay structures typically include a sequence of job grades in which jobs that are broadly equivalent in value are placed. A pay range is attached to each grade.

According to Armstrong and Murlis (2007), the maximum of each grade range is normally between 20% and 50% percent above the minimum. For example, a 40% range will span from R20,000 to R28,000. Furthermore, pay ranges can also be described as a percentage of the midpoint. For example, the range could be expressed as 80% to 120%, where the midpoint is R25,000, the minimum is R20,000 and the maximum R30,000. The midpoint is referred to as the target salary or reference point, which is regarded as the rate for an employee that is fully competent and is aligned to market rates.

Broad band Pay structures.

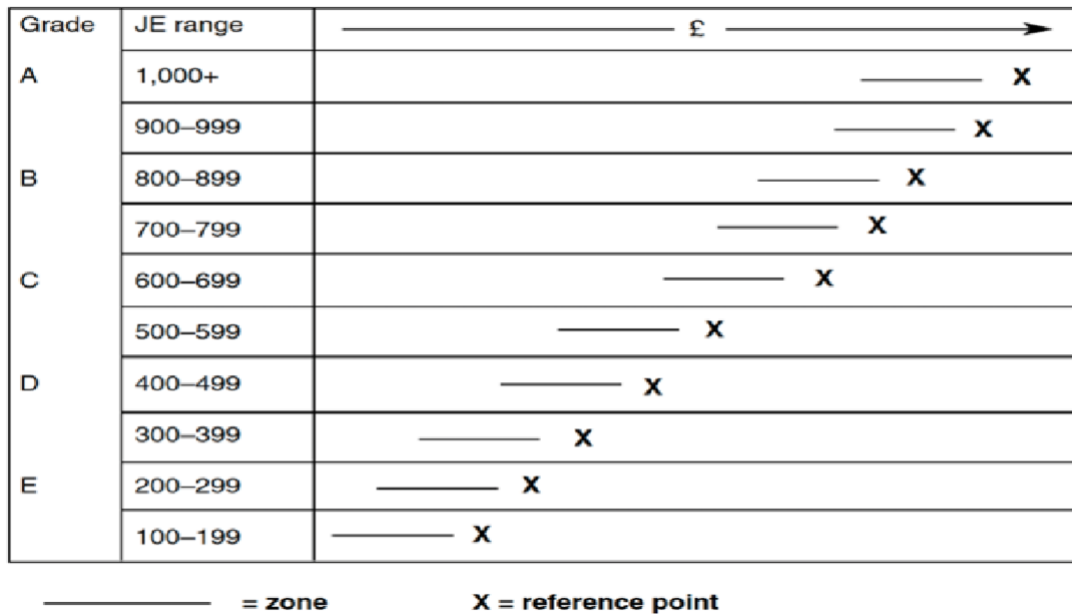
Armstrong and Murlis (2007) noted that narrow-graded structures have mostly been replaced by broad-band pay structures. Broad-banding refers to several grades that are compressed into a smaller number of wider bands in which pay is managed in a more flexible manner than in narrow-graded structures (see Figure 2.3 below for reference).

Broad banding is advantageous as it gives employees a clear indication of their next pay increase, which is important for employee motivation, as well as allowing employees to move

unilaterally within the organisation, where moving to other departments becomes easier if they remain on the same pay scale.

Figure 2.3

Broadband Pay Structure Example



Career Family Structures

In career family structures, jobs are grouped into families. Job families include jobs that are grouped by a particular occupation or function, for example, finance, marketing, IT, or operations which are related through the actions, knowledge and skills required to do the job (Armstrong & Murlis, 2007). However, the levels of responsibility, knowledge, skills, and competence should differ.

The levels within individual career families are defined by reference to the crucial activities carried out within them, as well as the knowledge, skills and competencies required to perform effectively. Career family structures promote effective career planning as it defines career paths within job families by identifying steps for career progression. These routes indicate to employees what they need to know and be able to do to move to a new career path. This career

planning knowledge provides the foundation for personal development planning for employees.

Job Family Structures

Career families are focused on the occupation or function of a job, while job families focus on common processes (Armstrong & Murlis, 2007). For example, legal jobs, IT, human resources, and finance would be identified as separate career families; however, a job family approach would combine these roles into one ‘business support’ family.

In some organisations, there will only be three to five different job families. Each job family is then separated into levels, which vary depending on the range of responsibilities they cover. Like career family, these levels are defined by levels of accountability, knowledge and skills required to do the job. Once organisations have established their pay structure, they need to construct a remuneration policy that explores the payment plan that outlines how employees will get paid for working for the organisation.

Setting Pay: Theory and Practice

Once organisations have a remuneration policy in place that describes “How?” and “What?” employees are paid, organisations need to decide “Why” some employees will get paid more than others.

There are numerous theories of pay dispersion (i.e., the difference in pay levels amongst individuals within and across organisational levels) explaining why executive pay and employee pay differs. Urson (2016) suggests two drivers of executive and employee compensation, namely, Agency theory and Managerial productivity theory. In addition to these two theories suggested by Urson (2016), Van Essen et al. (2017) propose two additional theories, namely the Structural theory and Human capital theory. These theories are said to explain why there is a justifiable disparity between executive pay and the average employee pay. These theories and approaches are briefly discussed below.

Agency Theory

According to Agency theory, a relationship exists between two parties, the agents and the principle (Bosse & Phillips, 2016). The agent supposedly acts in the interest of the principal. A problem arises, however, when ownership of the organisations, through shareholders, is separated from executives. The CEO and other executives are responsible for an organisation's performance and creating value for the benefit of shareholders and, therefore, act as agents of the shareholders. When executives do not act in the best interest of shareholders (the principal), agency conflict occurs, and it may affect organisational performance as executives act in their own best interest (Bosse & Phillips, 2016). To prevent this conflict, executives are given an ownership stake in the organisation, where financial means are used to align the interest of the executives to those of the shareholders. Frydman and Jenter (2010) note that if executives are compensated in this way (reducing agency conflict), executive compensation and organisational performance will have a positive relationship.

Marginal Productivity Theory

Marginal productivity theory states that decisions related to executive compensation are based on analysing an organisation's ability to generate profits and maximise productive output (Moseley, 2012). There are two main assumptions regarding the level at which executives are compensated.

Firstly, the size of the executive's compensation reflects the organisation's net profits. In an organisation where the CEO is the owner, the CEO would want the highest returns on his/her investments. These returns occur when the marginal costs of production are equal to the market price of the product. Here, the organisation maximises its profits, and the executive maximises his compensation – which is equal to the profit of the organisation.

Secondly, the executive's marginal revenue product is proportionate to the size of the executive's compensation package (Moseley, 2012). Here, it is assumed that the executive is hired for his economic contribution. Executives are often hired for their experiences, accomplishments, and ability to increase shareholder value through their managerial abilities. Here, executives earn larger salaries as they have the potential to positively influence the organisation's future profitability.

Structural Theory

The structural theory is based on the notion that the value of executives is the result of different ranks within the organisation (Johnes & Virmani, 2020). Simon (1957) argues that executive pay is determined by the obligation of internal consistency of the organisation's salary scale and the proportionality between the compensation of the executives and their employees.

Since organisations' hierarchy is typically pyramidal in shape, it is often socially accepted that executives earn disproportionately more than their employees (Johnes & Virmani, 2020). The more hierarchical levels within the organisation, the more executives can expect to be paid when following structural theory. For example, in the mining sector, from the bottom up, one gets the miner, shift supervisors, mine overseers, mine manager, human resource manager, office manager, director, executive director and CEO. The difference between a mine workers salary and that of the CEO is socially expected to be large, as the CEO is at the top of the organisation's hierarchy.

Shin (2014) proposed a reason as to why executives get paid disproportionately higher salaries than their employees, which is somewhat aligned to structural theory. He notes that job rewards and compensation are determined through social exchanges in which the employees' claim to organisational profits are determined by the level of contribution to the organisation. It can therefore be said that compensation is inherently political in nature, and the outcome, or employee compensation, is shaped by the bargaining power of the employee. It is argued that executives have significant bargaining power over their compensation, despite them being elected by shareholders to act in their best interest. This bargaining power that executives possess may be a contributing factor as to why there is a large pay disparity, as they have the power to decide their compensation alongside other shareholders (Shin, 2014). Furthermore, instead of seeing labour as an asset to be invested in, executives who hold the principle of maximising shareholder value are likely to view labour as a cost that should be minimised (Goldstein, 2012). Viewing labour in this way, coupled with the bargaining power of executives, could lead to executives cutting on labour costs (employee salaries) and increasing their own compensation.

Human Capital Theory

The human capital theory examines the individual differences of the executive to predict an appropriate compensation package (Tan, 2014). These include intrinsic characteristics, like the executive's knowledge and skills. The more knowledge and skills the executive possesses, the higher their human capital, and consequently, the larger their compensation package will be. Executives with greater human capital contribute to an increase in an organisation's competitive advantage, as their skills and knowledge will facilitate better management and decisions. Castanias and Helfat (1991) found that some executives will withhold their efforts (and human capital) if they do not believe they are being compensated accordingly. Therefore, organisations are required to compensate executives according to what they can offer organisations. What individuals and their jobs can offer organisations are established through thorough job evaluation, which ensures that individuals are getting paid according to the value they add to the organisation.

The Practice of Setting Pay

For organisations to establish and design equitable grade and pay structures, a systematic process for defining the relative worth or size of a job must be undertaken called job evaluation (Armstrong & Murlis, 2007). Grobler, Singh and van Niekerk (2013) define job evaluation as the formal assessment of the responsibilities related to a specific job, as well as the skills, qualifications and experience required to do the job effectively.

According to Armstrong and Murlis (2007), the aim of evaluating jobs are to 1) establish the comparative value of jobs based on fair judgement; 2) produce the information needed to design and maintain an equitable grade and pay structure; 3) enable consistent decisions to be made about job grading by providing an objective basis for grading jobs within a grade structure; 4) make rigorous market comparisons with roles of equal complexity and size; and 5) ensure all ethical and legal equal-pay-for-equal-work responsibilities are met by organisations.

There are two popular methods of job evaluation used by organisations, namely Paterson's Job Grading System and the Hay Group Method. Although organisations can structure their own job evaluation according to their specific needs, these two theories are often used as a guide

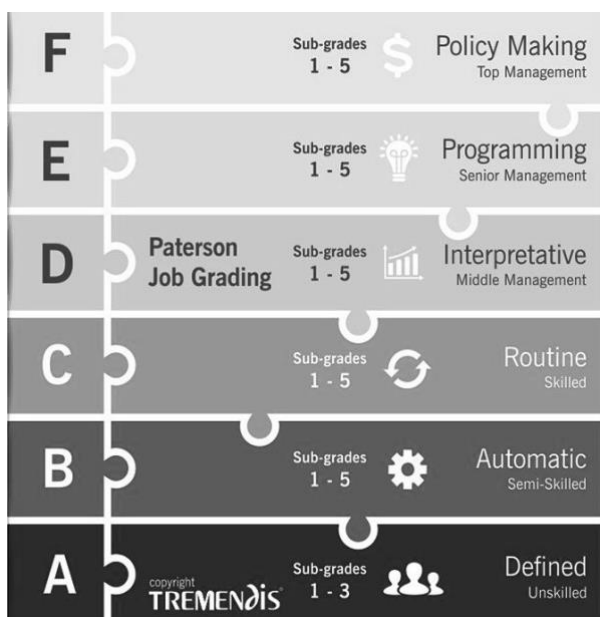
for job evaluation (Koziol & Mikos, 2020). These two methods of job evaluation are briefly discussed below.

Paterson's Job Grading System

The Paterson Method of job evaluation recognises that within jobs, there is one communality, and that is that all jobs require some decision-making (Timothy, 2019). Paterson and Husband (1970) note that jobs are differentiated according to the kinds of decisions being made. According to this grading system, there are six levels of decision that differentiate jobs. The 'higher' the level of a decision being made, the greater the value of the job to the organisation and thus receives a greater reward. The decisions that define the range of jobs in an organisation fall into six bands, as seen in Figure 2.4 below. Essentially, Paterson and Husband (1970) suggest that employees be paid according to their decision-making power. Therefore, executives who have the biggest decision-making ability, which impacts the organisation the most, should be paid the highest.

Figure 2.4

Paterson Bands of how Pay is Determined



The Hay Group Method

This method was amongst the first analytical methods of job evaluation developed by Edward Hay (1950). It used the strengths of factor comparisons, point rating and job ranking to bring consistent criteria to measure the comparative worth of various jobs within an organisation. The Hay Group Method uses three broad factors, namely know-how, problem-solving and accountability. These factors are further divided into subfactors: Know-how is divided into 1) the practical and technical knowledge of doing the job, 2) planning, organising, and integrating their knowledge and 3) their communicating and influencing skills. Problem-solving is divided into the freedom to think in one's job (thinking environment) and how challenging the thinking may be to solve problems within their role. Accountability is divided into 1) the freedom to act, 2) nature of the impact and influence one's job has on organisational results and 3) magnitude of the impact the role may have on organisational outcomes. If a job scores highly in all areas, they will get paid more than a job that scores medium to low in these areas.

These job evaluation models are two of the most widely used to evaluate the value of the role and what employees should be paid in that role (Koziol & Mikos, 2020). Although they are not the only models of job evaluation, organisations are encouraged to use any sound method of evaluating their jobs for employees to be paid in a fair and equitable manner compared to one another.

Paying Fairly

The issue of Pay Equity, Inequality and Fair Pay Discrimination

Pay equity is remunerating employees the same when the same job is performed with similar duties while accounting for factors such as the experience of the employee, how they perform in their job and tenure with the employer, for example (Buttner & Lowe, 2017). Pay equity is important within organisations, as it can increase employee efficiency and creativity, as well as help attract and retain the best employees (Sanséau & Opoku, 2019). Furthermore, pay equity can reduce employee turnover and increase organisational commitment. Two types of pay equity, namely internal and external pay equity, are found.

Internal pay equity. This type of pay equity refers to paying employees who work in the same organisation, doing the same work, in the same way (Torre, Pelagatti & Solari, 2015). For example, if a company hires two sales assistants with the same job description, they should be paid similarly. Organisations leverage market data and incorporate this data to establish their own overall pay structure. Jobs of relative value are assigned the same pay grade range, and this range is the same for all similar jobs, which promotes equity. Promoting equity in this way ensures that all employees within an organisation are paid fairly when compared to one another.

A study by Buttner and Louw (2017) showed that employees of colour who perceived that the organisation had good internal pay equity or that everyone was getting paid fairly were more committed to their organisation and performed better at their jobs. This result demonstrates that organisations should ensure that their organisation has internal pay equity; however, organisations should also pay according to the current market. This means that they need to demonstrate external pay equity too.

External Pay equity. External pay equity refers to an organisation's salary ranges versus the current market (Armstrong & Murlis, 2007). Simply, it is the relationship between what one organisation pays an employee in a certain role in comparison to what other organisations pay their employees in the same role (Torre et al., 2015). It is common for some organisations to set their pay levels higher in certain roles compared to their competitors to attract the best talent, which may improve the productivity and profitability of the organisation. This is known as 'leading the market'. Conversely, some organisations set their pay levels lower, hoping to save costs, otherwise known as 'lagging the market' (Chai, Jeong & Joo, 2020). When organisations lag the market, they risk not attracting the best applicants, thus risking their productivity. Organisations often set their pay levels the same as their competition, which is known as 'matching the market'. When organisations match the market, they maximise the quality of talent, as well as minimise the cost for the organisation (Torre et al., 2015).

There is a specific ratio that is often used by remuneration professionals to assess whether employees are getting the appropriate salary relative to the going market rate, called the Comparative ratio (Richardson & Thomas, 2013). The Comparative ratio (compa-ratio) is a metric that compares an employee's salary to the midpoint of the salary range for that specific

position at other companies. Essentially, the compa-ratio indicates how far one's salary is to the market midpoint. A compa-ration is calculated using the following formula:

$$\frac{\text{Actual Salary}}{\text{Midpoint of Salary Range}} \times 100 = \text{Compensation Ratio (percentage)}$$

For example, a compa-ratio of 1.00 (or 100%) means that the employee's salary is exactly what others in the industry are getting paid, the market average. However, if an employee's salary has a compa-ratio of 0.75, it means they are getting paid 25% less than the market average and therefore 25% less than others in the industry. Equally, a compa-ratio of 1.15 indicates that an employee is earning 15% more than those in the same industry. As of 2020, the median salary of South African CEOs was R5,242 million (BusinessTech, 2020). Therefore, R5,242 million is the average market value for CEO pay (compa ratio of 1.00). Numerous organisations use this ratio to determine employee salaries (Richardson & Thomas, 2013).

Fair pay discrimination

Pay discrimination occurs when employees who do the same work in the same role are paid disproportionately (Horwitz & Jain, 2011). The Code of Good Practice in South Africa states that if there is a difference in pay between those who do similar work, it needs to be justified and fair/equitable, i.e., based on the following factors: 1) the employees' respective seniority or length of service, 2) their respective qualifications, 3) ability, competence, or potential above the minimum performance requirements, and 4) quantity and quality of work. However, these factors are subject to the fact that all employees are equally subjected to the performance evaluation systems of the organisation and that these performance evaluations are consistently applied.

In conjunction with the Code of Good Practice, South Africa's Broad-Based Black Economic Empowerment (B-BBEE) allows restricted discrimination in favour of previously disadvantaged groups to redress the injustices of South Africa's past. To earn points and comply with B-BBEE recognition levels, organisations must hire a certain number of previously disadvantaged individuals (PDI). This means that organisations may have to pay certain PDIs more to retain them, to meet their compliance standards. Despite B-BBEE and the

justifiable factors set out by the Code of Good Practice, other forms of pay disparity for the same job is called pay inequality.

Pay Inequality

When pay is not equitable, in other words, employees who are doing the same job are paid differently due to other discriminatory factors, which is called pay disparity/inequality (Breza, Kaur & Shamdasani, 2018). The term pay disparity refers to the variation in compensation amongst all employees, executives, and others in an organisation (Rouen, 2018). The gender pay gap, or the difference in wages amongst men and women, is a prevalent subject of investigation amongst scholars (Adelekan & Bussin, 2018; Grün, 2003).

A systematic review by Bishu and Alkadry (2017) found that women are paid disproportionately less than their male counterparts in many of the studies they reviewed, even amongst employees in the same company and with the same jobs. There have also been numerous studies on the racial pay gap, the difference in pay amongst those of different races (Madden & Vekker, 2017; Pais, 2011). Mandel and Semyonov (2016) found that black men get paid approximately 15% less than their white male counterparts. The gap between black and white female employees is less; however, black women worked more hours than their white female counterparts. More recently, studies on pay disparity have focused on CEO pay (Bussin, 2015; Chen, Huang & Wei, 2013). The literature on average executive team pay disparity, however, is limited. Therefore, the literature on CEO pay disparity is dominant in this literature review. The present study, nevertheless, will focus on the average remuneration received by all executives when calculating pay disparity.

Regulating Pay: The importance of Remuneration Governance

Over the past few years, organisations have moved from fixed-pay structures to paying individuals based on their performance (Dromey & Rankin, 2018). In other words, variable pay has become a large part of individual salaries, especially amongst executives, where a large component of this pay is equity-based incentives. As a result of the move to more variable pay, the economic effect of executive remuneration has become a topic that is strongly debated (Bussin, 2015).

In the United States, executive remuneration had increased by 937% from 1978 to 2016, while the salaries of typical workers increased by only 11.2% (Gould, 2018). Similarly, prominent South African organisations are increasingly coming under scrutiny from the media, unions, and politicians for paying their executives' exorbitant salaries while their employees earn just above minimum wage (Padia, Naik & Callaghan, 2020). Due to the large pay gaps, there has been a large movement towards ensuring fair and equitable pay, which has catapulted the fair pay agenda.

The Fair Pay Agenda

To ensure that individuals are being paid fairly in the workplace, the Board of Directors of organisations appoint a Remuneration and Corporate Governance Committee (REMCO). The REMCO works with the Board with respect to certain matters for which the Board holds responsibility and must make important decisions (EY, 2019). The Board and REMCO work together to decide, 1) Total CEO remuneration, which includes remuneration, benefits, and privileges, 2) policies and procedures relating to corporate governance, 3) succession planning for the CEO role, 4) human resource strategy and organisational models, and 5) executive officer remuneration. REMCO supports the board in the first four instances above; however, on the final point (number five), REMCO shall act, be responsible and make the decisions regarding total remuneration of executive vice presidents.

Codes of Good Remuneration Governance

An organisation's Board, being supported by its REMCO, must meet certain criteria to ensure good remuneration governance within organisations. Both internationally and locally, several major guidelines or codes of good remuneration governance exist, including:

- Financial Stability Forum
- Commission of European Union
- Financial Services Authority
- Basel III Pillar III
- Securities and Exchange
- Commission (SEC)

- Dodd-Frank Wall Street Reform
- The Combined Code on
- Corporate Governance
- ASX Corporate Governance Council
- King IV™

We will, however, focus on America's Dodd-Frank policy and South Africa's King Code here. These policies ensure that organisations are being transparent regarding their remuneration policies and ensure organisations are held accountable when they do not meet the criteria for good remuneration governance (EY, 2019).

Dodd-Frank Policy. The Dodd-Frank Policy was enacted in July of 2010 in response to the 2007-2009 financial crisis for which executives were largely blamed (North & Buckley, 2011). The Dodd-Frank covers many areas of importance for organisations, including systemic risk and bank regulation, as well as derivatives and insurance. However, an important component of the Dodd-Frank is their policies regarding executive compensation (remuneration) and Corporate Governance.

The executive remuneration provisions are sequential: 1) Shareholders have a vote (once every three years) on executive remuneration, known as a 'say-on-pay', as well as golden parachutes; 2) new independence considerations and requirements for remuneration committees and their advisors; 3) shareholders have access to proxy resources to nominate directors; 4) in the event of a financial statement restatement, or a clawback policy, organisations are required to adopt a policy providing for the recovery of executive remuneration; 5) complete disclosure of organisational policies regarding the hedging of the organisation's securities by directors or employees; 6) discretionary voting by brokers on executive remuneration and other matters to be eliminated; 7) public organisations to disclose their CEO remuneration and mean employee remuneration ratio; and lastly 8) federal financial regulators are directed to adopt new rules to prescribe guidelines with the goal of barring incentive remuneration arrangements that may incite inappropriate risks at financial organisations with more than one billion dollars in assets (North & Buckley, 2011).

In summary, the Dodd-Frank ensures that executive remuneration is an agreed-upon amount, which subsequently ensures that executives and internal policy makers are not too involved in

remuneration decisions. Additionally, it ensures that the public is aware of executive-employee remuneration ratios, which may force organisations to rethink how much they pay their employees compared to their executives. South Africa has a code that addresses similar remuneration provisions, called the King Code.

King Code IVTM. The first King Code was published in 1994, which was the first corporate governance code for South Africa (Judin, 2020). Throughout the years, King code has been republished with updated codes of good corporate governance. In 2016 the King Committee published the King Code IVTM on Corporate Governance in South Africa, which had a specific focus on promoting transparency and targeted disclosures in all areas, with a specific focus on executive remuneration disclosure (Judin, 2020). King Code IVTM's principle 14 of recommended practice suggests that organisations' remuneration policies should be composed to achieve four main objectives: 1) to attract, retain and, reward talent; 2) to promote the achievement of strategic objectives which align with an organisations risk appetite; 3) to promote positive outcomes; and 4) to promote ethical and responsible corporate citizenship behaviour (SARA, 2020). Executive remuneration must be reported in organisations integrated annual reports according to King Code IVTM, which require them to disclose their executives' remuneration. It is best practice to disclose this information in a Single Figure Remuneration Table. Table 2.3 (see below) is an example showing ABSA's Single Figure Remuneration for 2017 and 2018.

Table 2.3

ABSA's Single Figure Remuneration Table for 2017-2018

Executive directors	Maria Ramos		David Hodnett ²		Jason Quinn		Peter Matlare		Total		2017 R
	2018 R	2017 R	2018 R	2017 R	2018 R	2017 R	2018 R	2017 R	2018 R		
Total fixed remuneration	13 814 435	14 959 312	6 376 677	12 009 312	5 825 350	5 309 313	9 307 074	10 009 312	35 324 536	42 287 249	
Salary	8 607 351	8 150 855	2 481 271	6 656 796	5 269 074	4 793 007	5 963 759	5 806 948	22 322 055	25 387 606	
Medical aid	115 788	106 476	55 658	136 980	98 436	90 732	198 528	182 558	468 410	516 756	
Pension	166 485	175 000	66 993	175 000	418 519	392 593	480 633	481 482	1 132 631	1 224 075	
Other employee benefits	49 210	46 981	1 904 475	40 536	40 321	32 981	39 154	38 314	2 033 160	158 812	
Role based pay	4 875 000	6 500 000	1 868 280	5 000 000	-	-	2 625 000	3 500 000	9 368 280	15 000 000	
Total short-term incentives	15 900 000	15 000 000	-	14 500 000	11 795 000	8 000 000	11 010 000	10 000 000	38 706 000	47 500 000	
Non-deferred cash award	7 950 000	3 000 000	-	2 900 000	5 898 000	1 600 000	5 505 000	2 000 000	19 353 000	9 500 000	
Non-deferred share award	-	3 000 000	-	2 900 000	-	1 600 000	-	2 000 000	-	9 500 000	
Deferred cash award	3 975 000	4 500 000	-	4 350 000	2 949 000	2 400 000	-	-	6 524 000	11 250 000	
Deferred share award	3 975 000	4 500 000	-	4 350 000	2 949 000	2 400 000	5 505 000	5 000 000	12 425 000	17 250 000	
Total long-term incentives	-	8 000 000	-	7 000 000	-	3 000 000	-	-	-	18 000 000	
Value at grant of restricted awards ²	-	8 000 000	-	7 000 000	-	3 000 000	-	-	-	18 000 000	
Value of long-term incentive vesting ³	-	-	-	-	-	-	-	-	-	-	
Total single figure remuneration	29 714 435	37 959 312	6 376 677	33 509 312	17 622 350	16 309 313	20 317 074	20 009 312	74 030 536	107 787 249	

In Table 2.3 above, the executive's salary, benefits, short-term incentives, and long-term incentives are required to be accurately reported (SARA, 2020). By making pay transparent, pay disparity figures have become more accessible than ever, prompting researchers to investigate pay disparity and what it might mean for organisations. King Code IVTM proposes that a background statement should be made in reference to six areas. These areas include: 1) internal and external factors that may have influenced executive remuneration; 2) recent results of remuneration policy voting, including the implementation report and responsive measures; 3) key areas of focus, as well as key decisions made by the REMCO during the reporting period, which include any changes to the remuneration policy; 4) organisations must disclose whether they used remuneration consultants and if the REMCO was satisfied that the decisions were objective and independent; 5) the REMCO's view of whether or not the remuneration policy has achieved its stated objectives; 6) future areas of focus of the Board and REMCO need to be disclosed.

In addition to the above, King Code IVTM recommends that shareholders are afforded the opportunity to pass independent non-binding advisory votes on the remuneration policy and implementation report for the organisation (SARA, 2020). If at least 25% of the board vote against either the implementation policy or remuneration report, or both, then the remuneration policy should set out a set of procedures the board will take to address their concerns with proactive engagement.

Despite policies like the Dodd-Frank act and King Code IVTM, large pay disparity continues to exist in organisations. This pay disparity can have negative implications on an organisation, which jeopardises the organisation from meeting its goals (Rouen, 2018). The next section will discuss the implications pay disparity has on organisations and, further, discuss how performance may be affected.

Pay disparity

There are two main differentiations of pay disparity, namely, horizontal pay disparity and vertical pay disparity (Rouen, 2018; Shaw, 2014). These are described in more detail below.

Horizontal Pay Disparity

Horizontal pay disparity is the measurement of variation in pay amongst employees with the same job. Horizontal pay disparity may be interpreted as unfair and unjustifiable, as those doing the same job should be getting similar pay. However, if they differ in their performance, horizontal pay equality violates the principle of equity since a higher effort is not rewarded with higher pay (Shaw, 2014). Literature on horizontal pay disparity mostly focuses on pay disparity amongst employees of different races, ages, and genders. For example, Iwasaki and Ma (2020) performed a meta-analysis of data from 199 previous studies on gender pay disparity in China. They found that the gender pay gap is steadily rising. On the other hand, a systematic review by Bishu and Alkadry (2017) found that the gender pay gap was more subtle in the public sector compared to the private sector. Despite legislation to reduce the gender pay gap in South Africa, gender disparity is still prominent within organisations. South Africa has a stagnant gender pay disparity median of 23% to 35%, suggesting that men are getting paid up to 35% more than women (Bosch & Barit, 2020). Bugeja, Matolcsy & Spiropoulos (2012), however, did not find an obvious difference in the salaries of male and female CEOs in the United States. This suggests that in the upper echelons of management, horizontal pay disparity is low. Studies on the gender pay gap amongst management in South Africa, however, are scarce.

Horizontal pay disparity amongst the executive team itself, however, has been found to have negative effects on an organisation's performance. Park (2018) found that larger pay disparity amongst those in the executive team of an organisation correlates with lower organisational performance. Rozé-Bianchi (2016) found the same in their study, which saw larger pay disparity amongst the TMT of S&P 500 organisations, which is a stock index of 500 large organisations in the United States of America, correlate with lower organisational performance between 2008 and 2013.

Horizontal pay gaps are important to understand, especially in SA; however, there is a shortage of literature regarding vertical pay disparity in SA. Therefore, the vertical pay disparity between the executive team and the average worker will be the focus of this paper.

Vertical Pay Disparity

Contrastingly to horizontal pay disparity, vertical pay disparity is defined as the salary variation

amongst employees doing different jobs (Rouen, 2018). Vertical pay disparity is often attributable to specific strategic organisational decisions on remuneration at different hierarchical levels (Gupta, Conroy & Delery, 2012). For example, in a financial corporation, the difference in remuneration between a junior financial analyst and a financial manager is hierarchical in nature and attributable to different market-related factors.

There are few studies on pay disparity amongst middle to lower-level jobs in organisations. There are, however, many studies on the pay disparity between top management teams and between CEO's and the rest of the organisation, or special specialised contexts (like sports teams and universities; see, for example, Kacperczyk & Balanchandran, 2018). According to Gupta et al. (2012), top management often have more experience and have been committed to the organisation for a longer period than a junior financial analyst, which essentially fairly warrants the difference in their salaries (Bussin, 2015). In this way, it appears justifiable why executive pay is largely higher than the average employee.

Shaw (2014) adopted the view that vertical pay disparity was neither beneficial nor detrimental to employees and that it depends on a host of internal and external factors. Kacperczyk and Balanchandran (2018) note that employees see vertical pay disparity through an internal career-ladder lens. It implies that employees can make sequential moves up the pay hierarchy and climb the promotional ladder. This is similar to the principles of tournament theory that is discussed in more detail in the section to come. Some authors, however, suggest that in some instances, vertical pay disparity may promote instances of discrimination, inequality, and perceived unfairness (Guo, Libby & Liu, 2017; Helm, 2015).

Measuring Pay Disparity

Several methods have been used in previous studies to calculate pay disparity. The most commonly used method is to calculate a Pay Gap Ratio (PGR), for which there are two approaches to doing this 1) to compare the CEO/executive salary to the lowest-paid salary in the organisation, or 2) compare the CEO/executive salary with the median salary of all employees. An example calculating a PGR using these two approaches are provided below:

CEO pay vs lowest salary paid

R5, 000, 000 / R72, 000

PGR = 70

CEO pay vs the median of all salaries paid

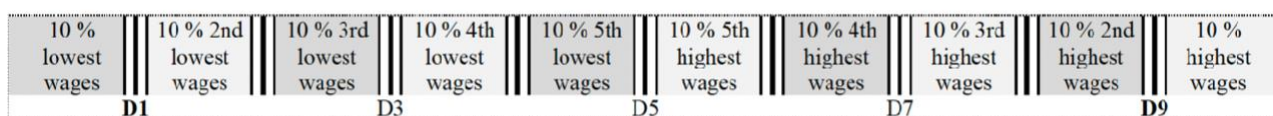
R5, 000, 000 / R300, 000

PGR = 16

Helm (2015) notes that the International Labour Organisation (ILO) calls vertical pay disparity ‘top-bottom’ inequality and measures it by calculating the distance between the top and bottom deciles of income dispersal, called the D9/D1 ratio. Here, ten income groups are identified, representing the income of 10% of the workers in the organisation, beginning with the lowest 10% of income recipients. Figure 2.5 below shows a visual representation of how the D9/D1 ratio is calculated (Helm, 2015).

Figure 2.5

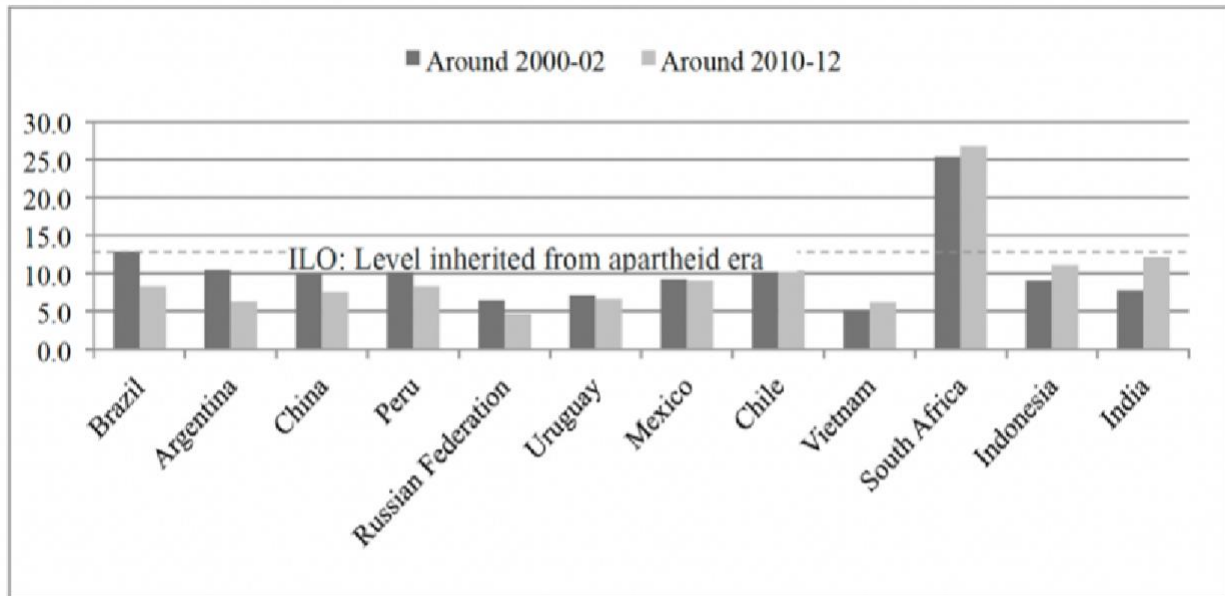
D9/D1 Calculations



The value labelled D9 is the threshold value between the highest-paid 10% and the second-highest-paid 10% in the organisation. The value labelled D1 is the value threshold between the lowest-earning 10% and the second-lowest earning 10%. The ratio between these two values is used to calculate the top-bottom inequality of the organisation (Helm, 2015). As shown in Figure 2.6 below, South Africa has the highest top-bottom inequality ratios amongst other developing countries.

Figure 2.6

Top-bottom Inequality of Developing Countries Between the Years 2000 and 2012 (retrieved from ILO Global Wage Report 2014-2015)



Drucker (1977; 2016) suggests that CEO pay should not exceed a ratio of 25:1, as, although this is not equal pay, he expressed that it would translate to a salary range employees would consider fairer and more desirable. However, the mining sector's CEO-to-employee ratio in SA is 66:1, which is more than double the suggested ratio (Bhorat et al., 2012). This suggests an inequitable pay disparity that exists between CEOs and employees in the mining sector. However, this is not just a concern witnessed in the mining sector. Numerous CEOs of companies on the Johannesburg Stock Exchange (JSE) are earning exponentially higher salaries than their employees. Some CEOs are earning a ratio of 29 times more than the recommended 25:1 ratio, as shown by the example above of Shoprite's CEO-to-employee pay ratio, which was 725:1. Due to the rising concern for these large pay ratios, remuneration governance has played an important role in combating unfair and unjustified executive pay.

Impact of High Pay Disparity on Organisations

High levels of pay disparity within organisations may cause employees to have negative attitudes toward the organisation and their work (Rouen, 2018). This may be explained by expectancy theory, where employees expect to be paid fairly within the workplace but are not, ultimately affecting their motivation and eliciting negative attitudes.

Farzand *et al.* (2018) found a significant negative relationship between pay inequality (pay disparity) and Organisational Citizenship Behaviour (OCB). This statistically significant negative relationship suggests that the greater the pay disparity, the lower employees' level of OCB will most likely, which may negatively affect individual performance (Farzand *et al.*, 2018).

Similar results were obtained in a study conducted by the Chartered Institute of Personnel and Development (CIPD, 2015) in the United Kingdom, in which more than 1,000 employees were surveyed regarding their executives' pay. Two-thirds of the employees in the sample said they thought their superiors were not remunerated according to the organisation's performance, whereas 60% of them said that the gap between their salary and their executives was demotivating.

In conducting a meta-analysis on pay disparity and performance, Shaw (2014) found mixed results. Fredrickson, Davis-Blake, and Sanders (2010) reported that pay disparity correlated negatively with organisational performance in a study conducted amongst 250 organisations on the S&P500 (which is an index with some of the largest organisations in the United States). Conversely, however, Hibbs and Locking (2000) found no significant relationship between pay disparity and organisational performance.

Despite the mixed results, it is argued here that pay disparity will most likely elicit negative feelings amongst employees, resulting in lower levels of motivation and, ultimately, lower levels of productivity that put organisational performance at risk (Rouen, 2018).

Organisational Performance

For an organisation to thrive in the modern world of increased competition, it should focus on consistent, optimal and increased performance (Singh, Darwish & Potočnik, 2016). The definition of organisational performance has greatly evolved since the 1950s, where it was considered synonymous with organisational efficiency measures such as productivity, flexibility, and adaptability (Georgopoulos & Tannenbaum, 1957; Price, 1972).

More recently, the definition of organisational performance refers to an organisation's ability to successfully utilise and exploit the available resources to accomplish the set strategic objectives of the organisation (Peterson, Gijbers, & Wilks, 2003; Taouab & Issor, 2019). Many organisations define performance in terms of their Key Performance Indicators (KPI's), which are measurable quantitative values that show to what extent a company is successfully accomplishing its key business objectives over the years (van Wyk & Wesson, 2021).

Why Measure Organisational Performance

Measuring organisational performance is imperative when attempting to bring about organisational improvement (Ahmed et al., 2018). Executives need to know whether they are meeting the goals of the organisation - or not. For example, if the organisation has a goal of R100 000 000 in Net Profit for 2021, the organisation must calculate their net profit and compare it to its goal. If they have not met their goal, executives need to make decisions and adjustments that will get them closer to their goal. Simply put, measuring performance is necessary for long-term performance improvement (Contu, 2020). The old adage credited to Tom Peters comes to mind "If it is not measured, it cannot be managed."

Additionally, effective performance measurement allows organisations to identify their strengths and weaknesses, identify areas of improvement, and help set benchmarks for future goals using historical data (O'Niell & Salas, 2018). There are many measures of organisational performance that organisations can adopt to measure their performance, which is discussed below.

Measures of Organisational performance

There are two overarching categories of organisational performance according to Luo, Huang and Wang's (2012) meta-analysis on organisational performance, which include economic and operational performance. These measures will be discussed in detail below. Furthermore, a matrix of which measures were used in South African studies with similar research questions is included as a unique contribution.

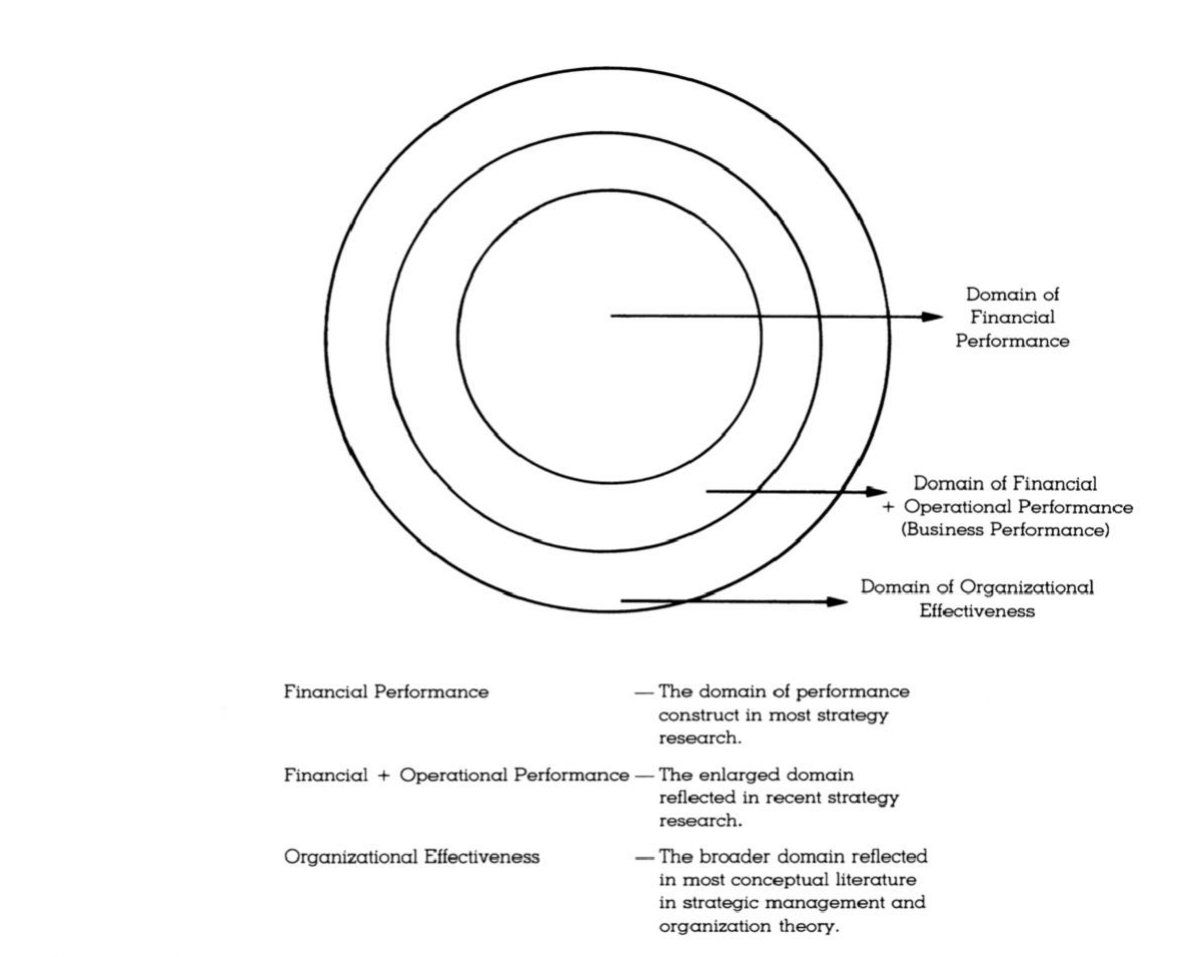
Economic Performance. Economic performance is centred on the outcome-based financial and market indicators, which reflect on the fulfilment of the economic goals of the organisation (Luo et al., 2012). Outcome-based financial indicators include economic value added (EVA) and profit growth, for example. Market performance indicators include market share, sales growth, and stock-market returns. Several researchers use other typical financial capital measures to measure organisational performance, namely earnings before interest and Earnings Before Interest, Tax, Depreciation, and Amortisation (EBITDA; Al-Matari, Al-Swidi & Fadzil, 2014; Taouab & Issor, 2019). According to Van Looy and Shafagatova (2016), these are accurate indicators of an organisation's performance and profitability. It is important to note that financial data is historic and backwards looking, where there is no guarantee of future performance (Benligiray & Ahmet, 2017). Despite these limitations, financial performance data is widely available and accepted as accurate inferential data about organisational performance.

Operational Performance. Instead of more objective measures of performance, some researchers also assess subjective indicators of workplace performance (Luo et al., 2012). Operational performance is the non-economic aspect, which includes observable outcomes, namely customer satisfaction, customer loyalty and the ability of the organisation to support local communities, for example. These outcomes are related to the organisation's competitive success factors, which include new product introduction and innovation, product service/quality, and marketing effectiveness that could lead to operational efficiency. Luo et al. (2012) noted the importance of the organisation's goals as a measure of performance, as it may often be overlooked. For example, in one year, the goal of an organisation may be to invest a certain amount in expensive technology to enhance future productivity. Consequently, the profit of the organisation may be negligible even though the organisation might have reached its goal. Here, profit may not be the most suitable measure of organisational performance.

An example of studies using operational performance measures is research by Hart et al. (2015), who observed the relationship between top management team compensation disparity and corporate social performance (CSP). CSP is defined as an organisation's arrangement of principles of social responsibility, policies, programs, processes of social persuasiveness and how it relates to the organisation's societal relationships through observable outcomes (Hart et al., 2015; Wood, 1991). Higher CSP is a performance measure that is valuable to organisations.

Figure 2.7

The Different Domains of Organisational Performance, according to Venkatraman and Ramanujam (1986)



The importance of looking at organisational performance in its entirety was demonstrated by Venkatraman and Ramanujam (1986). Figure 2.7 (see above) exhibits the conceptualisation of the different forms of performance measurement according to their importance. They mention

that the narrowest conception of organisational performance centres on the outcome-based financial indicators – which has been the dominant model of empirical study as of late. Broadening out of the circle is a combination of financial and operational performance measures, which is labelled as business performance in the figure. Measuring organisational performance in this way gives an overall picture of the performance of the organisation. The last band is that of operational performance. Venkatraman and Ramanujam (1986) note that key operational success factors may lead to the successful financial performance of an organisation. For example, if an organisation has high customer satisfaction ratings (operational measures), this may lead to more customers using the services of the organisation and therefore increasing their return on investments or EBIDTA (financial measures).

Economic and operational are not the only measures of organisational performance, according to Carton and Hofer (2006). In their book, with the title *Measuring Organisational Performance*, they mention that the most common measures of organisational performance in research and practice can be categorised as accounting measures, survival measures and market-based measures.

Firm Accounting Performance. Accounting measures rely on the financial information reported in income statements, balance sheets, and statements of cash flows. Accounting measures include profitability, growth and leverage, liquidity, and cash flow measures. According to Carton and Hofer (2006), Return on assets is the most used measure of performance in empirical research. Although much has changed since 2006, ROA remains a popular measure of organisational accounting performance. Other profitability accounting measures include return on equity, sales and investment, and net income. Net income (NI), the difference between sales and expenses, however, is not comparable across organisations without accounting for the size of the organisation (Carton & Hofer, 2006). For example, an increase of R1m net income for an organisation like Capitec is not comparable to a similar increase of net income for smaller businesses. Additionally, using NI as a measure of organisational performance does not consider change over time, therefore running the risk of floor/ceiling effects.

Growth accounting measures are values and ratios that show an indication of organisational growth (Carton & Hofer, 2006). The conceptualisation of growth in organisations has been in the context of resources and the business operations perspective. Sales growth, employee

growth and total asset growth are the various measures that can be used to measure organisational performance regarding organisational growth.

Another indicator of organisational performance is the ability of the organisation to pay back its liabilities, which are leverage, liquidity, and cash flow measures (Carton & Hofer, 2006). Each of the three categories relates to a separate component of an organisation's performance. Firstly, leverage refers to the financial structure of the organisation. Secondly, liquidity measures the ability of the organisation to convert its assets to cash. Lastly, cash flow refers to the amount of cash an organisation has generated relative to the demand for cash.

Survival Measures. Accounting measures are seen as the traditional method of measuring performance; however, Carton and Hofer (2006) suggest that the ability of the organisation to remain open over a specific period is an indication of organisational success. Survival measures are rarely used in other fields, like entrepreneurship, yet for longitudinal research, it is useful as it is an indication of good performance if organisations remain operational. The likelihood of an organisation surviving can be viewed as a relevant measure of one dimension of the financial performance of the organisation. The most common survival measure is Altman's Z-score. Altman's Z-score calculates the financial likelihood that an organisation will remain operational in the future (Carton & Hofer, 2006). A Z-score of more than 2.60 indicated that organisations were not in the 'bankruptcy' category; however, organisations with a score below 1.10 clearly are.

Market-Based Measures. Market-based measures are those that incorporate the market value of the organisation through ratios or rates of change. Market-based measures include the return to shareholders, market value added (MVA), holding period returns, Jensen's alpha and Tobin's Q. Tobin's Q is used regularly by scholars who want to measure organisational performance. For example, Li and Jones (2019) used short and long-term Tobin's Q to observe a possible relationship between the executive team power disparity and organisational performance. They believe that Tobin's Q was the most appropriate measure for organisational performance in their context. The sentiment that Tobin's Q is a good measure of organisational performance is confirmed by Padia and Callaghan (2020), who used it in their study of executive remuneration and organisational performance in South Africa.

South African scholars have predominantly used accounting, economic and market-based measures of organisational performance. Bussin and Modua (2015) used a variety of measures in their study to estimate the relationship between CEO remuneration and financial performance of South African organisations. They use earnings per share (EPS), ROE, economic value added (EVA), market value added (MVA) and market capitalisation (MC). Bussin (2015) advocates for the use of EVA when measuring organisational performance, as it attempts to measure the true economic profit of the organisation's economic success (or failures) over time. Chapri (2009) confirmed that EVA was superior to other financial metrics when capturing the true economic profit of the organisation. This metric allows executives to make better decisions for the organisation and motivates them to perform better (Bussin, 2015; Chapri, 2009).

Table 2.4

Matrix of Performance Measures Used in South African Literature

Author/ Date	Research Question(s)/ Hypotheses/Objectives	Performance measure used
Naik, Padia and Callaghan (2020)	The objective of the study is to test the relationships between different forms of firm performance and the remuneration of senior executives within the South African context of publicly listed companies.	<ul style="list-style-type: none"> • Tobin's Q
Bussin and Modua (2015)	The purpose of this research study was to investigate the relationship between CEO remuneration and organisation performance in South Africa between 2006 and 2012 and to determine whether the two constructs were positively correlated.	<ul style="list-style-type: none"> • Earnings per share (EPS), • ROE, • Economic value added (EVA), • Market value added (MVA) • Market capitalisation (MC) • Market value added (MVA)
Bezuidenhout (2021)	The primary aim of this study was to compare the pay-for-performance association between CEOs' remuneration and state-owned entity performance before, during and after the economic crisis.	<ul style="list-style-type: none"> • Turnover • Operating profit/loss • Net profit/Loss • Liquidity ratio • Solvency ratio • Return on Capital Employment • Return on equity
Marimutha and Kwenda (2019)	The Relationship between Executive Remuneration and Financial Performance in South African State-Owned Entities	<ul style="list-style-type: none"> • Return on Equity • Return on Assets
Scholtz and Smit (2012)	This article examines the relationship between short-term executive compensation and company performance for a sample of companies listed on the Alternative Exchange (AltX) in South Africa between 2003 and 2010	<ul style="list-style-type: none"> • Turnover • EBITDA • Total assets • Share price
Deysel and Kruger (2015)	The relationship between South African CEO compensation and company performance in the banking industry	<ul style="list-style-type: none"> • Share price • ROE • EBITDA • Headline earnings per share
Urson (2016)	CEO Pay Ratios and Company Performance: a Study of JSE- listed Consumer Goods and Services Companies	<ul style="list-style-type: none"> • EBITDA • ROE
Bradley (2013)	The goal of this research was to determine, in a South African context, whether there is any correlation between chief executive officer compensation and the performance of the company	<ul style="list-style-type: none"> • ROE • ROA • Earnings per share
De Wet (2012)	The purpose of this study is to test the relationship between executive remuneration of South African listed companies and EVA and MVA, as well as traditional performance measures such as return on assets (ROA) and return on equity (ROE).	<ul style="list-style-type: none"> • EVA • MVA • ROE • ROA
Bussin and Nel (2015)	The aim of this study was to understand the relationship between company financial performance using DuPont analysis and CEO guaranteed CTC in the South African retail and consumer goods sector.	<ul style="list-style-type: none"> • ROE, • Total asset turnover • Leverage

For the purposes of the present study, financial measures of organisational performance will be used as it is the narrowest and most studied measure of organisational performance (Venkatraman and Ramanujam, 1986). Furthermore, this data is readily available, whereas operational data is hard to come by. Organisational performance has been used in literature as the dependent variable of many studies (Bussin, 2015; Rouen, 2018). In the following section, the relationship between pay disparity and organisational performance will be explored.

The Relationship between Pay Disparity and Organizational Performance

The relationship between pay disparity and organisational performance is argued here using two theories that are dominant in pay disparity/organisational performance literature, namely 1) tournament theory and 2) equity theory. These theories are explained in more detail below, as well as being applied to the South African context.

Tournament Theory

Tournament theory attempts to explain why CEO and the average worker pay gap is purposefully large. Lazear and Rosen (1981) suggest that paying employees according to their ordinal rank rather than their output level encourages them to work harder and more productively as it serves as motivation to climb rank. Tournament theory suggests that the method of ranking form of compensation will result in lower-tiered employees working harder to improve their ordinal rank, with the goal of ultimately increasing their compensation. It is predicted that, as the pay disparity between job levels increases, greater employee effort is exhibited as the value of promotion increases (Rouen, 2020). This form of pay disparity is not interpreted as unfair, as there seems to be a relationship between employees' marginal contributions and their outcomes. Furthermore, these contributions do not fundamentally exceed some standard that is generally accepted (Carrel & Dittrich, 1978; Rouen, 2018).

The use of the Tournament theory or healthy competition as a means of motivation in the workplace has some drawbacks. Firstly, employees may view each other as competitors, which could result in detrimental and selfish behaviour to win the race to the top. Secondly, competition in the workplace could inspire counterproductive behaviour like sabotage, collusion, and cheating in these tournaments (Lazear, 2018; Sheremeta, 2016). Furthermore,

the win-lose structure of workplace tournaments will create more losers than there are winners, leading to considerable pay-off disparity. Lastly, relative incentives may cause lower-ability workers to weaken their efforts, also known as the discouragement effect.

Despite these drawbacks, competition within the workplace can also operate as a powerful incentive tool for employees to demonstrate effort beyond what is predicted by the rational decision-making model. The rational decision-making model assumes that individuals make choices that have an increase in individual benefits and minimising cost (Citroen, 2011). Additionally, tournaments in the form of rank-order competition in the workplace allow organisations to match their workers to more suitable jobs by observing employees' optimal skills, ultimately increasing organisational performance (Lazear, 2018). It does this by ensuring the employees are working optimally and that the appropriate, most compatible skills are used to complete tasks efficiently, eventually increasing productivity.

Erikson (1999), who conducted a study in the US on the effectiveness of employee ranking systems on firm performance, found a positive, statistically significant relationship between sales production of the organisations and pay disparity within the hierarchical structures in the firm. Furthermore, Heyman (2005) matched employer-employee datasets in Sweden to determine whether pay inequality had any relation to firm performance. For white-collar workers, pay disparity had displayed a positive, significant relationship to the accounting performance of the firm. In quantitative terms, this was evident as when wages were increased by one standard deviation, productivity increased by 20%. This result suggests that greater pay disparity increases the significance of promotion for average, lower-tiered employees, which positively impacts firm performance as employee effort and dedication are increased (Heyman, 2005).

Further support of the use of this theory in driving firm performance is evident in Mobbs and Raheja's (2012) study, which found that organisations with numerous candidates competing for promotion are more successful than those who are groomed to replace their superior. This is because potential competing employees are not as motivated to work towards a higher position when there is already a trained successor in waiting. Additionally, the authors found that the efforts and motivation of employees were visibly reduced in an organisation with an extremely large number of employees competing for the same role, as the probability of getting the promotion through simply exerting additional effort is much lower.

Mueller, Ouimet and Simintzi (2017) assessed the effect of within-firm pay inequality on firm performance amongst private and public firms after financial regulators and investors expressed concerns over the enormous pay disparity between CEOs and their employees in American companies. These investors were worried about lowering employee morale and productivity, which would negatively impact the organisations' overall performance. However, the opposite result was witnessed, as the study found that firms with higher pay inequality exhibited larger returns on equity and greater earnings. This was attributable to the many management levels within the organisations with higher pay inequality, which exists as achievable incentives for employees to work harder to move up the management levels (Mueller et al., 2017).

Contrastingly to Mobbs and Raheja (2012), as well as Mueller et al.'s (2017) arguments, a Kenyan study on CEO compensation and firm performance of commercial banks showed no significant relationship between pay disparity and performance (Aduda & Musyoka, 2011). However, this study was conducted amongst smaller banks in Kenya and not large banks listed on any indices. An explanation for this contrasting result could be due to a 'discouragement effect'. Here, employees with inferior abilities often reduce their effort when competing against those with superior abilities.

The discouragement effect has been explored in a study by Coffey and Maloney (2010), where they found that employees increase their effort only when they are sure there is a reasonable chance of winning. A large body of experimental research has given support to the discouragement effect, including rank-order tournaments (Dechenaux, Kovenock & Sheremeta, 2015), real-effort tournaments (Gill & Prowse, 2012) and all-pay auctions (Llorente-Saguer, Sheremeta & Szech, 2018).

Overall, Tournament theory has proven to be successful in explaining the drivers of employees' motivation to perform in the workplace; however, this theory does not account for or control for the various contextual factors within which an organisation operates. For example, some sectors in SA have strict hierarchies and chains of command that do not present the opportunity for their employees to advance within the organisation.

To illustrate, the mining industry in SA have set jobs where employees are not considered for promotion (Ledwaba, 2017). The mine workers' positions are rather rigid and, thus, it is difficult to be promoted to different positions within mining organisations. Therefore, when mineworkers become aware of the CEOs annual pay compared to their own, they are less likely

to perform well and work hard and may instead rather attempt to disrupt the work environment as a means of demanding justice and fair pay. As tournament theory is prominently applicable to financial sectors, where employees are given the opportunities to progress in the organisation, it cannot be applied to all sectors equally, especially in fields where promotion is difficult to achieve.

The problem with vertical pay disparity is not that there is disparity, as seen by the positive results in studies using the tournament theory, but rather the magnitude of pay disparity experienced by employees. If the difference in compensation is excessive, beyond justifiable means, employees may perceive this as unfair and are more likely to adjust their behaviour accordingly. Not every employee may perceive pay disparity in a competitive way, but rather as unfair and unjustified. The notion of pay disparity being unfair and unjust aligns with the next theory that explains the relationship between pay disparity and form performance, the equity theory.

Equity Theory

Contrary to tournament theory, equity theory states that perceived pay disparity results in feelings of unfairness and inequity, which often translates into disgruntled and unsatisfied employees acting against the organisation (Adams, 1963). Disgruntled and unsatisfied employees are detrimental to an organisation's performance, as employees may quit or shirk, resulting in lower organisational productivity. According to this theory, for employees to feel motivated and valued, they believe that their amount of input should be reflected in their compensation (i.e., their efforts should be translated into fair rewards). The three main assumptions underpinning equity theory, according to Carrell and Dittrich (1978) goes as follows: 1) employees foster beliefs (perceptions) about what comprises fair and equitable rewards for their contributions at work; 2) employees tend to associate their exchanges and experiences in the organisation with their employers; and finally, 3) if employees believe their treatment and rewards are not equitable or similar to their colleagues, they will be motivated to take actions that they deem appropriate to restore the equity balance.

Chinomona et al. (2017) conducted a study assessing the relationship between pay disparity in the workplace and employee intention to stay in Zimbabwe's SME's. The results showed a negative, significant relationship between pay disparity and the employees' intention to remain

in the organisation. Additionally, pay disparity was negatively, significantly related to employee performance. This result is aligned with a study by Huppertz, Arenson and Evens (1978), who also reported a significant relationship between pay disparity within the organisation and the employees' intention to leave, which could negatively affect the firm's performance. This experimental research aimed at evaluating the consequence of horizontal pay disparity in the workplace, sampled in-store employees, to observe the changes in behaviours of one group (Group A) when they discovered they were getting paid less than their equal colleagues (Group B). Consequently, group A staged a walk-out after realising they were getting paid less than their colleagues for the same job (and effort), which ultimately led to a reduction in sales.

Further evidence of the impact of pay disparity on employee motivation and productivity can be observed in a study by Breza et al. (2018). Here, they conducted a month-long experiment where Indian manufacturing workers were randomly assigned to different groups. One group of employees received a flat rate for their work, and others received higher pay according to their rank. The results showed that when the group receiving the flat rate found out their pay was less than their co-workers and they were unable to observe their co-workers' productivity (as they were working in a different section of the company), pay disparity brought about negative emotions and output was reduced by 0,45 standard deviations and attendance by 18%. This is in line with equity theory and its prediction that employees shirk when they foster emotions of unfairness in the workplace to restore psychological fairness (Adams, 1963). When employees were able to observe their higher-paid co-workers' productivity, who were perceived as more productive than themselves, pay disparity had no effect on attendance and output.

With regards to the research question of this research paper, employees will compare their efforts and rewards with the efforts and rewards of the organisation's executives to assess if they are being remunerated fairly. Here, employees may have a framing bias against the information given to them regarding executive pay. Framing bias demonstrates that employees may base their reaction to executive pay on a small piece of information without the full picture (Entman, 2010). For example, employees may not be aware of how and why executive pay is structured in a particular way but simply deem the final salary as unjust. Additionally, employees often feel that they put in more effort and work hours than the executives and still get paid significantly less than they do, which furthers their perception of injustice.

Dai, Kong and Xu (2017) propose that the relationship between pay disparity and organisational performance can have the presence of both tournament and equity theory concurrently. The authors investigated this relationship by studying the financial data of 1328 publicly traded, non-financial companies in China between 2003 and 2011. The authors reported that organisational performance was an inverted U function of the pay disparity. This outcome suggests that an increasing pay gap between executives and the average worker may affect organisational performance if the gap is too high or too low. More technically, if the disparity between executives and employees is below the optimal level, tournament theory will come into effect. Contrastingly, equity theory comes into effect when the disparity between executives and employees is above the optimal level. This notion of an inverted U relationship is supported by Mahy, Rycx and Volral (2011), who found that pay disparity had a positive effect on the productivity of an organisation in Belgium, but this effect also decreased at higher levels of pay disparity.

Based on the arguments presented above, the following hypotheses were formulated:

***H₁**: A statistically significant negative relationship exists between pay disparity (as measured by the difference between the executive team's average pay and average employee pay) and organisational accounting performance (as measured by ROI, ROA, Price-to-EBITDA, EVA, and EBITDA).*

Conclusion

To conclude this chapter, pay disparity has been a topic that has frequented debates amongst researchers, politicians, and the media. Originally, pay structures were put in place to ensure that employees are paid according to the value they add to an organisation. Executives are remunerated more than the average employee due to the large value they add to the organisation in terms of their knowledge, experience, and the requirement to take on additional risk. However, due to traditional pay structures moving towards a pay-for-performance configuration, executives can earn up to three times their guaranteed package in long-term incentives. Bussin (2015) notes that the long-term incentives that executives receive are what makes the pay gap between executives and the average employee considerably large.

Literature seems to be divided on the direction of the effect of large pay disparities between executives and the average employee; however, most studies, it seems, found that there are negative effects on organisational performance. To explain the relationship between pay disparity and organisational performance, equity theory states that if employees do not feel like they are being remunerated fairly, they become demotivated or foster negative attitudes towards the organisation. These attitudes may affect their performance, thus affecting an organisation's performance, a notion that was investigated empirically in the present study.

CHAPTER 3

METHOD

In the method chapter, a description of the research design, as well as the various research approaches that were employed, are provided. The methods and procedures utilised in undertaking the current study are further described here, which includes a description of the sampling strategy, the realised sample, the various measures used to estimate the constructs under investigation, the data collection procedure that was followed, and the statistical analysis utilised to answer the research question. Finally, a description of the ethical and data management considerations is also provided.

Research Design and Approaches

A research design is used to structure a study in a manner that allows one to effectively answer a research question. McGivern (2013), in emphasising the importance of choosing an appropriate research design, notes that the quality of a research project is determined by the research design that was used.

For the purposes of the present research study, it was decided that an exploratory research design would be appropriate. Exploratory research aims to explore research questions and topics that have not yet been clearly defined (Moody, Kinderman & Sinha, 2010). According to Stouffer (1937), the general goals of exploratory studies are to nullify, verify and clarify, i.e., that researchers should use statistical tools to verify one's hypothesis to clarify the relationship presented in the hypothesis. Exploratory research is, therefore, utilised to gain a better understanding of a topic or problem that has not yet been fully explored. Given there are a limited number of research studies that have investigated the relationship between pay disparity and organisational performance, an exploratory research design was, therefore, deemed to be appropriate

As was also the case with previous studies that have investigated the relationship between pay disparity and organisational performance, it was, given time and cost constraints, decided that, for the purposes of the present study, secondary quantitative data would be collected from publicly available annual integrated financial reports of selected JSE listed companies for a

period of four (4) years. Acquiring primary salary data from a big enough sample of organisations to be able to conduct inferential statistical analysis would most likely have proven too time-consuming and costly. Moreover, it would be a serious challenge to get the salary data from enough organisations, given the sensitivity of salary data. It is highly unlikely that many companies would be prepared to share this kind of data with external parties.

Generally speaking, the main advantage of using secondary data is its accessibility and time-saving abilities. The data that was required to be able to provide an answer for research question of the present research study is readily available to the public, given that Section 8 of the JSE Limited listing requirements state that organisations must disclose financial information in the form of integrated annual reports and financial statements every fiscal year (i.e., the taxable, financial year). Additionally, secondary data, such as the financial data from JSE listed organisations, is deemed to be of high quality (Johnston, 2017). Given the listing reporting standards, which are standardised, the data protocols and procedures are well documented carefully audited, which ensures that the data is not only valid and reliable but also directly comparable between organisations (Van den Eynden et al., 2011). The strict listing requirements and clearly stipulated protocols for collecting and capturing it eliminates a common disadvantage of using secondary data in applied research, namely the lack of information regarding research design and data collection procedures.

Crawford et al. (2014) and Faleye et al. (2012) used the current year employee costs divided by the current year number of employees when estimating the relationship between pay disparity and organisational performance. Urson (2016), however, suggests using the average number of employees and salaries or compensation paid over a period should be used as it more accurately represents the rolling average of employee numbers and salaries paid. Urson (2016) argued that this approach stabilises the average employee salaries over time and reduces noise in the data.

Variations in pay disparity and performance within an organisation can exist for various reasons. One reason for such differences in pay disparity, which is quite common, would be that incentives often have a significant effect on the total remuneration executives earn in a particular year (as was discussed in Chapter 2). However, given STIs and LTIs are discretionary in nature (i.e., variable pay), this could result in a spike in the pay disparity of an organisation, and if that particular year is chosen to be included in the sample, this could introduce error into the data. As suggested by Urson (2016), to smooth the data to some extent

and hopefully reduce the possibility that anomalous data, such as a once-off large bonus pay-out year, might introduce a threat to the validity of the study, data for each company that was included in the study were collected for the period 2017 and 2020 (i.e., four years) and then averaged. The average salary data was then used in the estimation of the relationships and when making comparisons with other organisations (Morrow, 2011).

Measures of Study Variables

To estimate the relationship between the selected construct under investigation, i.e., between pay disparity and organisational performance, three variables need to be measured, namely 1) organisational performance and 2) pay disparity. To be able to have a measure of pay disparity, a Pay Gap Ratio was calculated that required two variables 1) the average executive team pay, and 2) average employee pay of each organisation in the sample. The variables for which data were sought are discussed below.

Organisational performance

Previous literature provides numerous methods in measuring organisational performance, the dependent variable in the present research study. The most frequently reported organisational accounting performance measures were utilised for the purposes of the study and included:

- **Earnings before Interest, Tax, Depreciation, & Amortization (EBITDA).** EBITDA is a measure of an organisation's profitability. Rubio et al. (2021) note that EBITDA is a more explicit measure of organisational performance, as it displays earnings before the influence of accounting and financial deductions. It is important to note that EBITDA is not a generally accepted accounting principle (GAAP) measure and may vary amongst organisations. However, Bloomberg has a standard method of measuring all the listed organisations' EBITDA; thus, the metric is standardised in the current sample.
- **Return on assets (ROA)** is a monetary ratio that indicates how successful an organisation is in relation to its total assets. The ROA ratio indicates to investors and shareholders how competently organisations are using their assets to generate profit

(Heikal et al., 2014). ROA is indicated as a percentage, which is derived from using an organisation's net income and average assets.

- **Return on Investment (ROI)** is a performance measure that indicates how well an organisation's investments are performing relative to the investment cost (Botchkarev & Andru, 2011). To calculate ROI, the return on investment is divided by the cost of the investment and is expressed as a ratio or percentage.
- **Price/EBITDA Ratio** is used by investors to analyse an organisation's potential as an investment. The ratio compares the organisation's enterprise value before interest, tax, depreciation, and amortization (Mauboussin, 2018). The price/EBITDA ratio is often used as a valuation tool, as it compares the organisation's value, which includes debt and liabilities, to its cash yield. The lower the ratio value, the more undervalued an organisation is.
- **Economic Value Added (EVA)** measures an organisations financial performance based on its profits calculated by deducting its cost of capital from its operating profit, as well as adjusting for taxes (van der Poll et al., 2011). Since EVA attempt to measure the true economic profitability of an organisation, it is also referred to as economic profit. Van der Poll et al. (2011) noted that organisations in South Africa would benefit from using the EVA metric in conjunction with other performance measures to gain an overall picture of organisational performance.

After considering the current literature regarding financial performance indicators in Chapter 2 (Table 1), the above measures of performance were deemed to be appropriate, as they are accepted by academic scholars in the field of organisational psychology, and they accurately represent organisational accounting performance (Bussin, 2015).

Pay Gap Ratio

There are, as described in Chapter 2, several ways in which pay disparity can be measured. For the purposes of the current research study, a method needed to be found that would allow pay disparity to be estimated within the constraints of the organisation data that is publicly available.

Given the listing requirements described above, JSE listed companies report on all aspects of executive remuneration (incl. base pay, financial benefits, STIs & LTIs, as well as any other forms of financial remuneration). Individual salaries of employees who are not at executive levels are not published; however, the number of employees and the salary budget for the financial year is. For the purposes of the current research study, a Pay Gap Ratio (PGR) was calculated as follows:

$$\text{Pay Gap Ratio} = \frac{\text{Average Executive Pay}}{\text{Average Employee Remuneration}}$$

Pay disparity was, therefore, for the purposes the present study expressed as multiples, i.e. by how many times is the average employee salary multiplied to get to the average executive salary.

Calculating Average Executive pay

In Bezuidenhout et al.'s (2018) research study on CEO pay in South Africa, guaranteed total package, which is made up of basic salary and financial benefits, as well as the short- and long-term incentives were added up and used as a measure of overall CEO remuneration. The remuneration of all executives was calculated in the same way, and with the CEO, remuneration was then averaged, resulting in average executive remuneration for the executive team of an organisation. Below is the equation used to calculate average executive remuneration:

$$\text{Average Executive team remuneration} = \frac{\sum \text{total rem of CEO} + \text{total remun of executive 1} + \text{total rem of executive 2} + \dots n}{\text{Number of executives in the executive team}}$$

The table below (see Table 3.1) summarises the assumptions of calculating executive pay used for the purposes of the present research study.

Table 3.1*Assumptions During the Measurement Process*

Challenges	Assumption
There are only calculations for average CEO pay and not average executive team pay used in previous studies.	The same calculation for CEO pay was used for every executive in the organisation. Thereafter, the total compensation was averaged to obtain an average executive team level of compensation
Many executives get paid in shares	The cash value of shares was calculated by multiplying the number of shares by the average share price of the shares for the respective year
Some executives get paid out cash bonuses or long-term incentives (LTIs)	There is debate as to whether once off bonuses or cash pay-outs should be included in the compensation of executives. Bussin (2015) suggests that long-term incentives (LTI) be removed from the compensation equation. However, for the present study, it is proposed that one include LTI in one equation and keep it separate in another and compare the results of each to average employee pay and firm performance. All analyses of the relationship were based on three levels of executive compensation to counter this problem.

For the purposes of the present research study, three measures of average executive pay were obtained based on three sequential versions of executive pay:

1. **Total COE**, i.e., the fixed pay executives received over the period (i.e., a guaranteed package consisting of the cash salary) plus the (fixed) value of financial benefits.
2. **COE+STI**, i.e. The total COE plus the STIs earned over the period; and
3. **Total remuneration**, i.e., included the value of LTIs earned over the period (i.e., $COE+STI+LTI = \text{Total Rem}$). It is to be noted that Total remuneration is calculated on the present value of shares (although those shares have not yet vested).

It should be noted that given, as described above, three averages of the numerator in the PGR calculation were used (i.e., total COE, COE + STI and total remuneration), three PGRs were calculated, and the estimation of the relationship was calculated three times using all three forms, i.e., based on each of the PGRs calculated.

Average Employee Remuneration

Although organisations are required to report the salaries of the executives, it is not mandatory for them to report on individual employee remuneration of any other employee. An accurate enough estimation of average or median employee remuneration needed to, therefore, be found.

Following what was done in previous studies of this nature, to calculate an average employee salary for an organisation, the total salary bill was collected from the annual integrated reports and, after subtracting the executive remuneration from it, divided by the average number of employees that were reported to have worked for the company for that period.

For the purposes of the present study, the following equation was used to calculate the average employee remuneration:

$$\text{Average Employee Remuneration} = \frac{\text{Total employee cost to organisation}}{\text{Number of employees in the organisation}}$$

As before, data was collected for a four-year period and averaged, which hopefully smoothed the data and made it less susceptible to years in which, e.g., retrenchments were made, or more employees were appointed given a particular strategic need to do so.

Sampling

Purposive or judgement sampling, an example of a non-probability sampling technique, was used to obtain secondary quantitative data that could be used for the present study. Purposive sampling is the deliberate choice of participants that possess certain qualities the researcher needs to conduct a research study (Etikan, Musa & Alkassim, 2016). The goal of purposive sampling is to focus on certain characteristics of a population, in this case, the financial and employee data of organisations listed on the JSE, to answer the research question. Arguably, purposive or judgement sampling was appropriate because the sample for the study is predetermined by the availability and accessibility of the data.

Exclusion Criteria

Organisations that did not meet certain criteria had to be excluded from the sample. Over the years, various organisations have delisted from the JSE, and any organisations that had delisted over the period for which data was collected, was omitted as this could result in an inconsistent data set. Inconsistent data sets may skew results and lead to inaccurate calculations (Field, 2018).

Furthermore, several CEO's and executives of JSE listed companies are paid in foreign currencies. In previous studies, some authors have converted these salaries from the foreign currency to Rand using the average exchange rate for the given year; however, given the volatility of the Rand, this is would most likely introduce a confounding variable and affect the validity of the results (Basskin, 2002). Furthermore, the data of executives who were employed by the organisations for less than 12 months were also discarded, as adjusting their employment time to 12 months would most likely add another confounding variable when estimating the salary that may have been earned had the individual been employed in the years that were not.

Data Collection Procedure

As previously mentioned, organisations listed on the JSE are required to report on their financial position annually. The requirements for what needs to be reported in integrated annual reports include the data that is required to answer the research question, namely executive pay, overall employee cost, number of employees and various performance indicators.

The data pertaining to the relevant study variables is available from IRESS Research Domain, formerly known as McGregor BFA. The IRESS technology company provides financial software to global organisations. Access to the IRESS Research Domain was obtained through the UCT library. Not all the data was, however, found using the IRESS, and a Bloomberg terminal was also used for collecting data.

A breakdown of where each element of the data was found is provided in Table 3.2 below.

Table 3.2*Sources of the Data used in the Analysis of the Current Study*

Description	Source
Executive remuneration (including Guaranteed pay, STIs and LTIs)	IRESS
Number of employees per company	IRESS (cross-referenced with financial statements)
Overall expenses paid to employees	Financial statements
Performance indicators	Bloomberg (cross-referenced with IRESS)

The raw data obtained from the IRESS and Bloomberg terminals were in the form of annual financial statements of organisations listed on the JSE, which was extracted and presented in an Excel spreadsheet format.

After the data has been collected, collation of the data is required (Meyer & Nelson, 2020). Since the integrated reports were in the form of multiple spreadsheets, the required data of all the organisations was added onto a single spreadsheet. The data was collated according to categories, namely, data of CEO pay, ‘other’ executive pay, total employee salary expenses, number of employees, and the various performance indicators. Thereafter, the data was cleaned to ensure all the required information was present.

Organisations that did not present all the relevant information across the four years were excluded from the sample to reduce missing data. When data sets are not complete, it can lead to poor data quality, where one cannot confidently move on to the next stage of the research process (Cheng & Phillips, 2014). Thereafter, the data was coded into meaningful variables. Once the data was collated, cleaned, and coded, it was ready to be analysed using the Statistical Package for the Social Science (SPSS ver 27).

Realised Sample

Based on the process of selecting and downloading the appropriate data from JSE listed companies using the IRESS and Bloomberg terminals, sorting and cleaning the data, ensuring that all the inclusion criteria had been met and all the data that included the exclusion criteria was removed, a large enough sample of organisations (n=660) was realised that would allow for inferential statistics to be calculated.

The realised sample consists of 1,703 observations consisting of executive and employee data obtained from 660 JSE listed organisations for a four-year period for which full data (i.e., no missing data) could be obtained (2017, n=168; 2018, n=144; 2019, n=163; 2020, n= 185; i.e., n=660 in total). The organisations were further divided into the relevant sectors of the South African economy by the JSE, and to observe possible differences in the variable relationship amongst the different sectors, sector was included as a grouping variable. The distribution of the realised sample of organisations across the various sectors of the economy as well as years is summarised in Table 3.3 (see below).

Table 3.3

Summary of the Realised Sample for the Relevant Years and Sectors of the Economy

Sector of the Economy	2017		2018		2019		2020		TOTAL	
	f	%	f	%	f	%	f	%	f	%
Basic Materials	21	12.5	19	13.2	15	9.2	20	10.8	75	11.4
Consumer Discretionary	23	13.7	19	13.2	22	13.	28	15.1	92	13.9
Consumer Staples	13	7.7	15	10.4	16	9.8	18	9.7	62	9.4
Energy	1	.6	1	.7	2	1.2	3	1.6	7	1.1
Financials	30	17.9	26	18.1	25	15.	31	16.8	112	17
Health Care	7	4.2	7	4.9	8	4.9	6	3.2	28	4.2
Industrials	39	23.2	29	20.1	33	20.	35	18.9	136	20.6
Real Estate	17	10.1	15	10.4	22	13.	22	11.9	76	11.5
Technology	11	6.5	9	6.3	13	8.0	15	8.1	48	7.3
Telecommunications	6	3.6	4	2.8	7	4.3	7	3.8	24	3.6
TOTAL	168	100	144	100	163	100	185	100	660	100

The industrials sector, followed by the financial and consumer discretionary sectors, were the most represented sectors of the economy in the realised sample, while the energy and

telecommunications sectors were the least represented. The distribution of the sectors in the present study was expected, as the finance and industrials sectors have the most organisations listed on the JSE. Furthermore, the energy and telecommunications sectors have the least organisations listed on the JSE (JSE, 2022), which is similar to this current study's sample. Therefore, although random sampling was not used, the current sample mostly depicts the distribution of listed organisations on the JSE.

Statistical Analysis

Data analysis is the process of transforming and modelling data with the goal of discovering useful information, which supports decision-making (Field, 2018). The secondary quantitative data that was collected was imported into the Statistical Package for Social Scientists (SPSS ver 27). Once the data file was appropriately coded and cleaned, descriptive statistics were calculated to summarise the data, as well as inferential statistics calculated to test the proposed hypotheses (i.e., to conduct null hypothesis testing). In terms of the inferential statistics that were used, a decision needed to be made whether parametric and non-parametric tests of association be used to estimate the relationship between pay disparity and organisational performance, given the data was significantly skewed.

If data are normally distributed, a Pearson's Correlation (r) analysis is utilised to estimate the strength and direction of a bivariate relationship. However, as was anticipated, the data collected was not normally distributed. Where data is found to be not normally distributed, a non-parametric test of association such as Spearman's Rho (r_s) should be used. A non-parametric test is appropriate if the assumption of normality is not met, as it does not have any underlying assumptions about the data (Schrober, Boer & Schwarte, 2018). Furthermore, Spearman's Rho is less sensitive to outliers, which was expected in the data. Although Pallant (2020) note that Pearson's coefficient is robust enough to estimate relationships from non-normal data thus, both approaches to assessing the relationship were used and the result compared.

To further investigate the multivariate relationships, a multiple regression analysis was conducted. The aim of calculating the multiple regression was to investigate whether it is possible to identify which variables explain the most variance in the dependent variable, i.e., organisational. There are three integral assumptions of regression that could challenge the

validity of results, namely homoscedasticity, normality, and independence of errors (Berenson et al., 2012; Urson, 2016). If it is found that these assumptions are violated after conducting a preliminary analysis of the assumptions, the variables would be log-transformed to meet these assumptions, and multiple regression analysis conducted. Field (2018) notes that log transforming skewed variables will improve the fit of the model by reducing the number of errors that may occur with skewed data.

Ethical Considerations

Due to the nature of the data collected, i.e., being publicly available, readily accessible through online sources, as well as the manner in which it is collected, audited and reported, i.e., following international best practices/regulations, there were no substantive ethical concerns associated with the use of data. No personal information of executives or employees was consulted, collected, reported, or stored. The individual executive data that was originally collected had been averaged into executive team remuneration, i.e., no personal individual information was stored or reported on either.

Data Management Considerations

As suggested above, there are no substantive ethical risks associated with the use of this data. Nonetheless, the data was stored according to ethical and privacy legislation and guidelines. Cloud-based storage was used to ensure the data was stored securely and only being accessible to the parties involved in the present study, i.e., the researcher and supervisor. No personal identifier was included in the data that was stored. The data will not be disposed of for at least five years.

Conclusion

In this chapter, the research method that will be utilised to answer the research question is provided. In this research study, an exploratory research design, making use of secondary, quantitative, and longitudinal data, will be employed. After the data acquired from various terminals are collected and cleaned, descriptive statistics, followed by inferential statistics

(Which include correlational and regression analysis), will be utilised to answer the research question. The results obtained following the steps described above are presented in the next chapter.

CHAPTER 4

RESULTS

As has been described above, the aim of this research study was to investigate the relationship between pay disparity and organisational performance. To estimate this relationship, publicly available remuneration and organisational accounting performance data were collected from JSE listed organisations. Once this data had been collected, collated, and cleaned, it was analysed. Firstly, descriptive statistics were calculated to summarise the data and describe its pertinent features (incl. calculating the Mean, Standard Deviation, Median, Kurtosis, Skewness). Pearson Product-Moment Correlation Coefficients (Pearson's r) and Spearman's Rank Correlation Coefficients (Spearman's ρ) were then calculated to estimate the bivariate relationship between the selected constructs under investigation. Regression analysis, specifically Linear Regression, was further utilised to assess the multivariate relationship. The results of the various statistical analyses are reported here and were used to make inferences about the relationship under investigation based on the data that was collected.

Summarising the Data

The data obtained on the study variables were firstly described by calculating typical Descriptive statistics (incl. Minimum, Maximum, Mean, Standard Deviation & Median), which are reported below for all study variables, beginning with executive pay, average employee pay, pay gap ratios, and finally, organisational accounting performance data.

Summarising Average Executive pay Data

The average executive pay for each company was calculated by adding all the executive salaries in the executive team, divided by the number of executives in the respective team for the period 2017 to 2020. Table 4.1 (see below) summarises the minimum, maximum and average executive salary for each of the companies in the sample, in terms of total COE (guaranteed cash pay), COE+STI (guaranteed cash pay + annual short-term incentives earned within the period) and their total remuneration (COE+STIs+LTSs; i.e., guaranteed cash pay + short-term incentives + long-term incentive incentives that were paid out within the period).

Table 4.1*Descriptive Statistics: Average Executive Team Remuneration paid between 2017–2020 (n=660)*

	Minimum	Maximum	Mean	Std. Deviation	Median
Total COE¹	R600,000	R14,573,333	R4,450,329	R2,372,299	R3,794,000
COE + STIs²	R600,000	R41,952,333	R7,218,542	R5,398,007	R5,854,083
Total Rem³	R600,000	R72,067,000	R9,507,757	R8,848,309	R6,752,000

¹Total COE = base cash pay; ²COE+STI = base salary + short term incentives paid; ³Total Rem = the total remuneration executives receive including base salary + short term incentives + long-term incentives paid

As seen in Table 4.1, there is a substantial difference between the minimum and maximum remuneration in all the remuneration categories. In terms of the total COE, there is an R13,973,333 difference between the lowest and highest-paid executive teams in terms of their base cash salaries. Similarly, there is an R41,352,333 and R71,467,000 difference between the lowest and highest-paid executive teams in terms of their guaranteed pay plus short-term incentives (i.e., COE+STIs) and total remuneration (COE+STIs+LTIs), respectively. The large difference between the highest and lowest paid executive teams suggests that there is a large variance in executive team remuneration data. This is confirmed when observing the difference between the mean and median statistics. The median for average executive team remuneration is lower than the mean across all companies, suggesting that the data is skewed.

Summarising Average Employee Salaries

The average employee salary for each company was calculated by taking the total salary bill, subtracting the remuneration of the executive team (reported above), divided by the number of employees reported to have been employed by the organisation during the period under investigation. The Descriptive statistics of the average employee salaries across all companies in the sample (n=600) are summarised in Table 4.2 (see below).

Table 4.2*Descriptive Statistics: Average Employee Salary paid between 2017–2020 (n=660)*

	Min	Max	Mean	Std. Dev	Median	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Mean Salary	R60,357	R5,602,094	R463,730	R530,213	R322,716	4.73	.10	31.02	.19

As evident in Table 4.2 (see above), as was the case with the average remuneration received by the executive teams, the average employee salaries differ substantially between the lowest and the highest average employee salary for the companies included in the sample (variance = R5,541,737). This difference is most likely due to the different types of employees across all JSE listed organisations. Similar to what was found when summarising the average executive team pay, the median average employee salary differs from the mean in that it is lower than the mean, suggesting that the data is positively skewed.

Summarising the Pay Gap Ratio

As described, pay disparity was, for the purposes of the present study, estimated using a Pay Gap Ratio (PGR) that was calculated using the average executive salary divided by the average employee salary. The PGR was then expressed as multiples, i.e., how many times the average employee salary is multiplied to get to the average executive salary. Different PGRs were calculated based on the three levels of executive pay.

Table 4.3*Descriptive Statistics: Executive Team- Employee Remuneration Pay Ratio between 2017–2020 (n= 660)*

	Min	Max	Mean	Std. Dev	Median	Skewness		Kurtosis	
						Statistic	Std. Error	Statistic	Std. Error
Total COE Multiple¹	0.5	119	16.62	14.97	12	2.40	.095	8.68	.190
Total COE +STI Multiple²	0.7	198	25.81	26.60	19	2.94	.095	11.55	.190
Total Rem Multiple³	0.7	279	33.49	37.16	21	2.58	.095	8.59	.190

¹Total COE = base cash pay; ²COE+STI = base salary + short term incentives paid; ³Total Rem = the total remuneration executives receive including base salary + short term incentives + long-term incentives paid

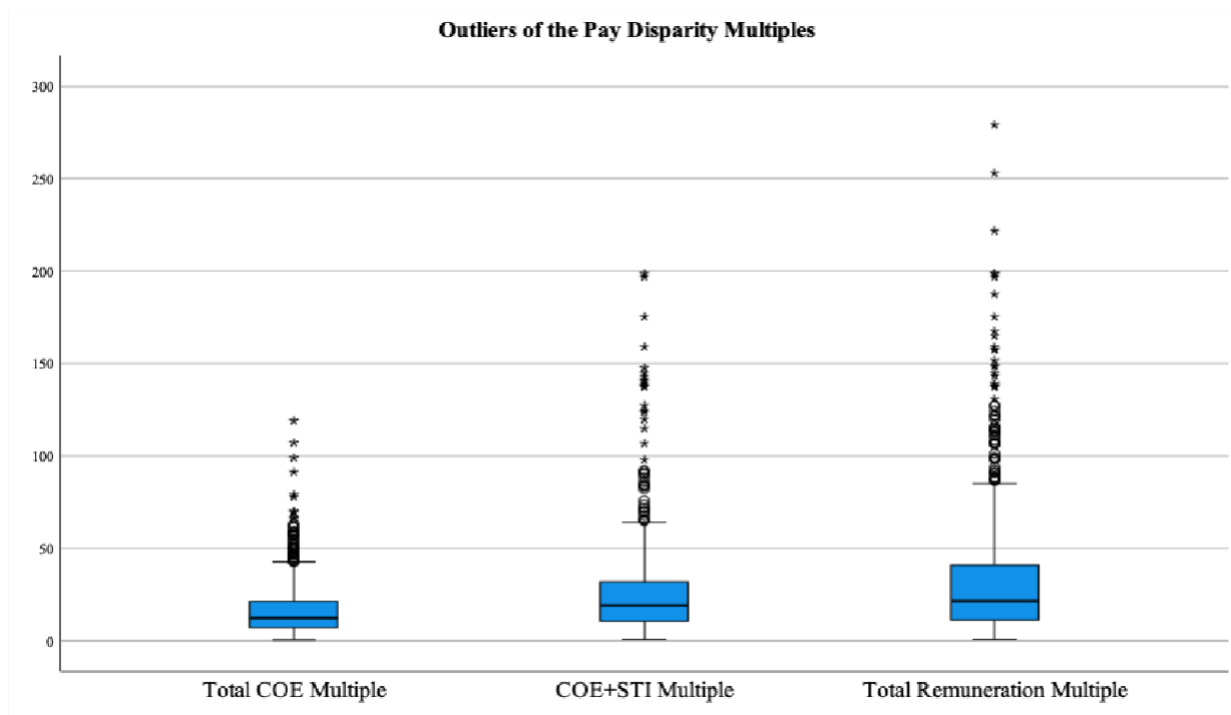
As evident from Table 4.3 (see above), the PGR based on average total COE is the only ratio less than the suggested ratio of 25 times as suggested by Druker (1977; 2016). The average total COE + STI, and total remuneration (COE+STI+LTI) PGRs are, however, both higher than the suggested reasonable pay disparity ratio. This result suggests that the pay disparity observed when comparing average employee salary to average executive team base pay is somewhat within the norm. However, when executives receive their STIs and LTIs, it increases the PGR to levels well above the suggested ratio. Nevertheless, when observing the median, the PGRs are all below the suggested ratio. It is expected that the median differs from the mean, as both variables included in the PGR equation are positively skewed (as described above).

Table 4.3 shows that in one company, the executive team earned, on average, 0.5 times more than their employees, whereas in another company, the executive team, on average, earned 119 times more than the average employee. This result is expected in the same way as different average employee salaries are expected. Some organisations have mostly low skilled workers who do not get paid as much as organisations with knowledge workers. Thus, the executives in these organisations with lowly skilled workers will inherently have larger pay ratios than organisations with knowledge workers.

Figure 4.2 below visually represents the outliers that resulted in the distribution of the data being skewed.

Figure 4.1

Outliers for the Different Pay Disparity Multiples (n=660)



As shown in Figure 4.1 (see above), the PGR base on Total COE (i.e., guaranteed cash pay) has the least number of outliers. It is not unexpected that STI's and LTI's widen the pay gap, given the fact that as one goes up the organisational hierarchy, it is expected that more remuneration will be at risk, which acts as an incentive to direct executive behaviour towards generation higher profits and creating more shareholder value.

There are substantially fewer outliers when STI's and LTI's are added, suggesting that there is greater uniformity when setting the fixed pay (cash salaries) of executives. In other words, it would seem as if remuneration committees stuck closer to market-related guaranteed cash salaries when setting executive pay. The effect that the outliers may have on the mean results of the multiples suggest that the median results be reported on for the multiples. According to Weiers (2010), the median of the data offers a greater predictable data value than the mean if there are numerous outliers in the data. Therefore, the median from the descriptive tables below will be interpreted further (Field, 2018).

Summarising Organisation Accounting Performance Measures

Organisational accounting performance measures were also collected for each company in the sample to estimate the relationship between pay disparity and organisational performance.

The descriptive statistics of the organisational performance data were calculated and summarized in Table 4.4 (see below). These descriptive statistics display the average accounting performance of organisations between 2017 and 2020.

Table 4.4

Descriptive Statistics: Organisational Performance of Total Data set between 2017-2020

	n¹	Minimum	Maximum	Mean	Std. Deviation
Price/EBITDA Ratio	625	162871.8	256000	874.42	16049.84
ROE	539	.0	918000	1874.71	39541.19
ROA	625	-388	111	5.29	23.95
EBITDA	599	-85458	51103	2215.80	6923.84
EVA	660	-273511	63084	-523.30	11510.79

¹Sample size for the various organisational performance measures differ because all organisations do not report the same performance indicators

As seen in Table 4.4 (see above), the EVA of the organisations in the sample were negative, suggesting that organisations were not performing well in terms of economic value added (profitability) over the past four years. On average, organisations in the sample performed reasonably well in terms of their ROE and ROA ratios, as well as on EBITDA. Carton and Hofer (2006) suggest that EBITDA scores above 10 are considered good, and ROA scores above 5% are appropriate. This suggests that the JSE listed organisations included in the sample were performing as expected over this period, at least when it comes to key accounting performance measures.

Summarising the Descriptive Statistics per Sector of the Economy

It was argued above that JSE listed organisations within the various sectors of the economy would, on average, have different levels of pay disparity due to the nature of the industries within the sector. As shown in Table 4.5 (see below), average employee salaries for companies

differ amongst the different sectors reported (i.e., there seem to be between-group differences). Additionally, the average PGRs for the different sectors are reported in Table 4.6.

Table 4.5*Descriptive of Mean Number of Employees and Average Salaries per Sector*

Sector		n	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error	Kurtosis	Std. Error
Basic Materials	No. of Employees	75	92	80,000	15,633	19032	1.819	.277	3.388	.548
	Salary	75	R66,159	R1,408,089	R317,820	R221,348	1.993	.277	6.853	.548
Consumer Discretionary	No. of Employees	92	42	56,100	10,556	14,849	1.866	.251	2.270	.498
	Salary	92	R60,357	R1,244,581	R269,274	R195,049	3.205	.251	12.142	.498
Consumer Staples	No. of Employees	62	30	147,478	224,57	36,443	2.690	.304	6.497	.599
	Salary	62	R77,489	R612,437	R264,211	R157,676	.978	.304	-.139	.599
Energy	No. of Employees	7	20	6,739	1,111	2,486	2.623	.794	6.906	1.587
	Salary	7	R153,650	R757,234	R405,448	R200,331	1.132	.794	1.190	1.587
Financials	No. of Employees	112	13	73,639	9,950	15,589	2.006	.228	3.455	.453
	Salary	112	R109,602	R5,602,094	R689,686	R814,802	3.341	.228	13.710	.453
Health Care	No. of Employees	28	102	20,946	7,595	7,231	.680	.441	-1.081	.858
	Salary	28	R109,127	R712,449	R397,957	R167,022	.233	.441	-.520	.858
Industrials	No. of Employees	136	25	132,870	10,049	23,363	4.123	.208	17.411	.413
	Salary	136	R77,211	R3,179,939	R387,122	R362,378	4.335	.208	27.441	.413
Real Estate	No. of Employees	76	6	1,966	219	414	3.245	.276	10.425	.545
	Salary	76	R81,543	R4,851,851	R844,971	R862,591	2.674	.276	9.204	.545
Technology	No. of Employees	48	54	10,000	2,360	2,776	1.519	.343	1.057	.674
	Salary	48	R96,279	R989,013	R407,638	R187,628	.632	.343	.636	.674
Telecommunications	Number of Employees	24	82	18,835	5,332	6,711	1.011	.472	-.498	.918
	Salary	24	R205,551	R907,455	R564,686	R220,426	-.344	.472	-1.123	.918

Table 4.6*Descriptive of the PGR Multiples for the Various Sectors*

Sector		N	Minimum	Maximum	Mean	Std. Deviation	Median	Skewness		Kurtosis	
								Statistic	Std. Error	Statistic	Std. Error
Basic Materials	Total COE Multiple	75	1.8	79.0	23.88	17.59	20.77	1.237	.277	1.359	.548
	COE+STI Multiple	75	2.0	147.6	41.18	37.73	27.71	1.585	.277	1.804	.548
	Total Rem Multiple	75	2.0	279.1	57.76	55.89	40.24	1.817	.277	4.000	.548
Consumer Discretionary	Total COE Multiple	92	1.9	61.4	21.81	14.11	18.42	.741	.251	-.312	.498
	COE+STI Multiple	92	2.1	119.7	30.93	23.81	23.35	1.565	.251	2.800	.498
	Total Rem Multiple	92	2.1	157.4	40.75	33.48	29.63	1.483	.251	2.029	.498
Consumer Staples	Total COE Multiple	62	2.8	119.0	30.84	25.38	22.49	1.796	.304	3.016	.599
	COE+STI Multiple	62	3.0	198.6	51.48	47.29	34.82	1.743	.304	2.439	.599
	Total Rem Multiple	62	3.0	198.6	62.31	51.47	46.51	1.187	.304	.574	.599
Energy	Total COE Multiple	7	5.2	17.4	11.18	4.15	10.08	.228	.794	-.559	1.587
	COE+STI Multiple	7	5.6	28.9	15.26	7.39	14.60	.926	.794	1.508	1.587
	Total Rem Multiple	7	5.6	28.9	17.11	8.20	15.03	.185	.794	-.870	1.587
Financials	Total COE Multiple	112	.5	70.1	13.20	12.75	10.07	2.305	.228	6.104	.453
	COE+STI Multiple	112	1.2	70.1	21.69	16.34	18.07	.875	.228	-.081	.453
	Total Rem Multiple	112	1.4	221.9	32.75	36.37	22.23	2.582	.228	8.391	.453
Health Care	Total COE Multiple	28	5.0	33.0	13.40	6.76	11.36	1.819	.441	3.413	.858
	COE+STI Multiple	28	9.0	46.8	19.96	9.27	17.54	1.804	.441	3.422	.858
	Total Rem Multiple	28	9.2	67.9	22.73	12.24	19.19	2.241	.441	6.251	.858
Industrials	Total COE Multiple	136	.6	44.9	14.58	9.07	12.97	1.059	.208	1.349	.413
	COE+STI Multiple	136	.7	97.8	21.30	15.76	18.26	2.070	.208	7.035	.413
	Total Rem Multiple	136	.7	157.6	25.80	22.87	20.34	2.610	.208	10.039	.413
Real Estate	Total COE Multiple	76	.5	38.5	8.49	8.09	5.34	1.401	.276	1.813	.545

	COE+STI Multiple	76	1.2	39.5	11.71	9.67	9.41	.764	.276	-.285	.545
	Total Rem Multiple	76	1.2	107.1	14.31	15.61	9.49	3.130	.276	15.753	.545
Technology	Total COE Multiple	48	2.1	21.4	9.13	5.05	8.11	.748	.343	-.413	.674
	COE+STI Multiple	48	3.1	37.5	12.38	8.12	10.87	1.133	.343	1.050	.674
	Total Rem Multiple	48	3.1	44.4	13.63	9.61	11.23	1.224	.343	1.079	.674
Telecommunications	Total COE Multiple	24	3.1	27.1	10.86	6.04	10.71	.938	.472	1.206	.918
	COE+STI Multiple	24	3.2	64.8	17.77	13.14	16.36	2.003	.472	6.338	.918
	Total Rem Multiple	24	3.3	64.8	20.09	15.77	17.92	1.506	.472	2.391	.918

When comparing the different sectors, the consumer staples sector was found to have the highest total remuneration PGR across the period under investigation (i.e., 2017-2020), a sector where executives on average earned 62 times more than the average employee (see Table 4.5 above). The consumer staples sector also posted the lowest average employee salary per annum during the period under investigation. In contrast to the consumer staples sector, the real estate sector posted the smallest pay gap ratio (PGR=9.49) and the highest average employee salary of the sectors summarised ($M= R844,971$; $n= 76$, $SD= R862,591$).

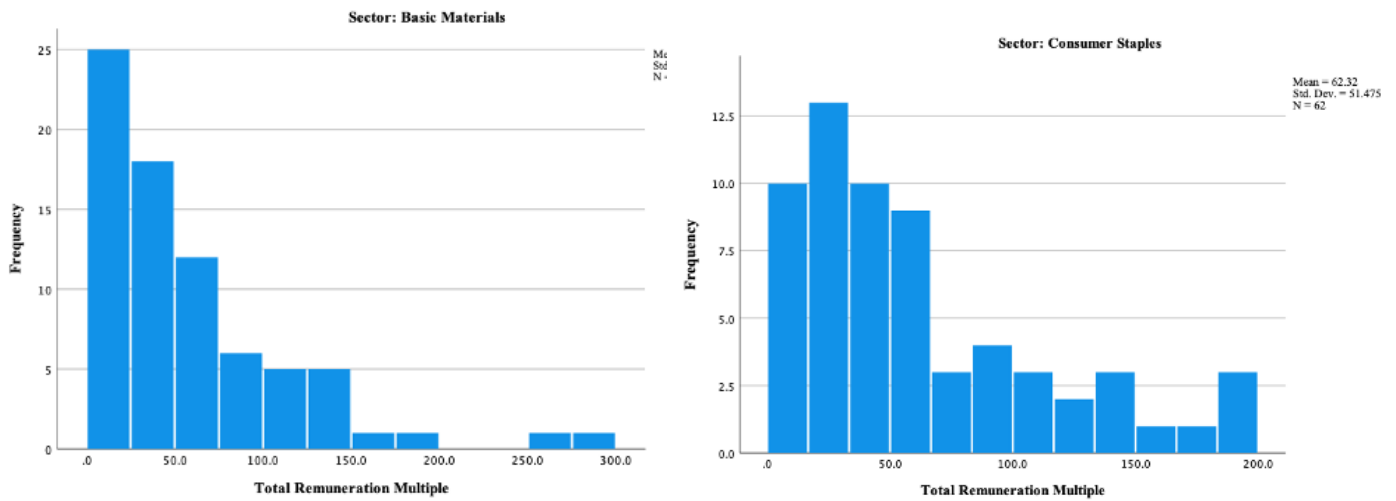
These results can, arguably, be expected. Employee salaries in the real estate sector are predominately commission-based, where earning potential is unlimited and based on house sales where the commission is sizable. (BusinessTech, 2018). Companies in the consumer staples sector, on the other hand, employ many blue-collar workers, as well as unskilled workers earning minimum wage. A large PGR and low average employee salaries can, therefore, be expected within companies in the consumer staples sector of the economy.

As seen in Table 4.6, the basic materials sector posted the highest maximum pay gap ratio, where executive teams on average earned 279 times more than the average employee in that sector. Contrastingly, the Energy sector posted the lowest maximum pay gap ratio (=28 times more than the average employee salary), a sector where employees are paid on average R405,448 ($n= 7$, $SD= R200,331$) per annum. The possible reason for the relatively low maximum PGR may be that most workers hired in the Energy sector are highly skilled knowledge workers that command high salaries (An & Mikhaylov, 2020). The financial sector was, on average, the second-best paying sector, where employees earned on average R689,686 for the period under investigation.

Figure 4.2 below displays the spread of pay disparity multiples for the basic materials and consumer staples sector.

Figure 4.2

Descriptive Statistics: Total Remuneration PGR for Basic Material and Consumer Staples Sector



The basic materials and consumer staples sectors had the largest pay disparity multiples and the most extensive spread of multiples, with executive pay ranging from 1.8 to 279 times more than the average employee in the basic materials sector and 2.8 to 198 more in the consumer staples sector. This result seems to suggest that these two sectors have the greatest range in their pay disparity multiples.

Assessing the Data for Statistical Assumptions

Both the mean and median results are reported for the current research study. However, there were deviations in the descriptive results among the mean and median values for average executive team remuneration in some cases. It is suggested that the median results be considered more seriously, as the median ignores the outliers, which may inflate or deflate the mean, depending on the outlier (McChesney, 2012). Extreme outliers were expected in the present study's data, as executive remuneration is determined by various factors that can bring about some individuals commanding much higher salaries than others. If executives are in high demand, organisations need to make their remuneration competitive, creating outliers in the data (Bussin & Mondau, 2015).

Shapiro-Wilk's test of normality was used to determine whether the data were normally distributed. Shapiro-Wilk's test uses visual means (i.e., visually inspecting normality plots) and

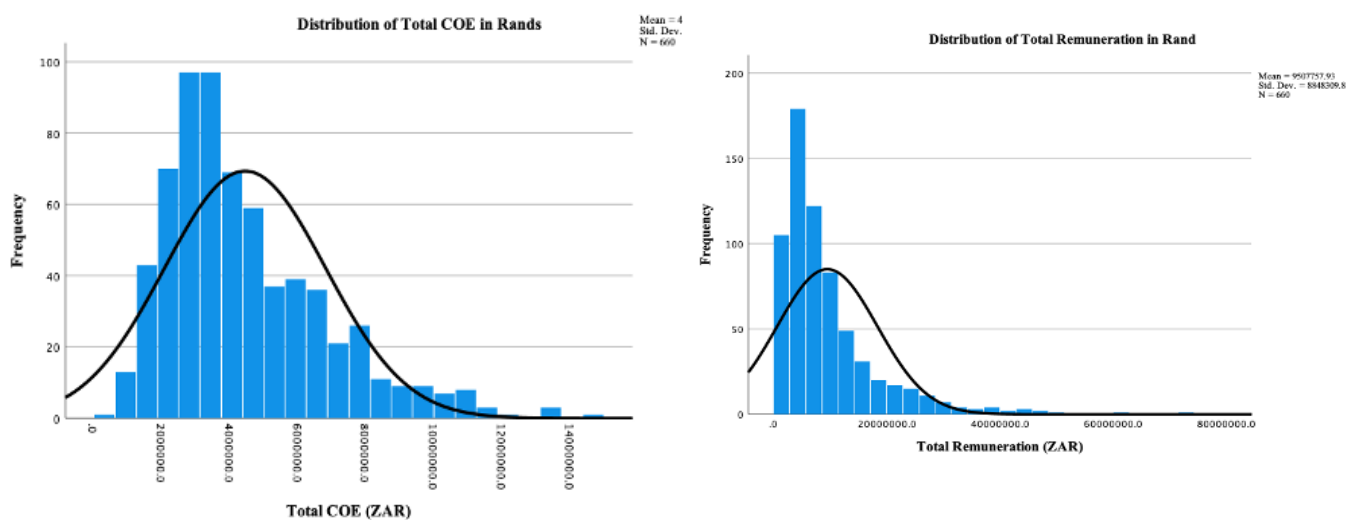
statistical means of determining normality (calculating a test statistic with an accompanying p-value).

As shown in Figure 4.1 (see below), the distribution of the executive remuneration data (both total COE and total remuneration data) collected from a sample of JSE listed companies was observed to be positively skewed. To further assess this statistically, skewness and kurtosis statistics were calculated. The kurtosis of a distribution indicates whether it is more heavily - or light-tailed relative to a normal distribution. A kurtosis of more than three (3) stipulates that a distribution will produce more outliers. In contrast, a kurtosis statistic of less than three (3) indicates a distribution will produce fewer outliers relative to a normal distribution (Field, 2018).

The skewness of the total COE and total remuneration data were found to be 1.13 and 2.40, respectively, suggesting that the distributions were left- or positively skewed. The kurtosis of the total COE was found to be 1.27 ($p < .001$), indicating that the distribution was platykurtic. In contrast, the kurtosis of the total remuneration was 8.12 ($p < .001$), indicating a more heavy-tailed distribution compared to a normal distribution. The distribution results can be noted visually (see Figure 4.3 below). The difference in kurtosis between total COE and total remuneration suggest more outliers when observing average total executive remuneration.

Figure 4.3

The Distribution of Total COE and Total Remuneration data



The distribution of the executive remuneration data (i.e. both Total COE and Total Remuneration) collected from a sample of JSE listed companies for the period 2017 to 2020 was, as described above, visually observed to be positively skewed, a conclusion supported by Descriptive statistics and confirmed when it was found to be statistically different to a normal distribution ($p < .01$). In other words, based on the p-value related to the Shapiro-Wilk statistic falling in the alpha rejection range, the null hypothesis (i.e., that the distribution of the data is a close approximation of the normal distribution) was rejected, indicating support for a distribution that significantly differs from that of normally distributed data.

Furthermore, none of the pay disparity or pay gap ratios were normally distributed when visually inspected (see Figures A1, A2 and A3, which can be found in Appendix A), or statistically, as all the p-values were statistically significant (i.e., $p < 0.01$), therefore rejecting the null hypothesis of normality.

Since all the remuneration data and the PGRs were significantly non-normally distributed, it would be appropriate to calculate non-parametric statistics when estimating the relationship. It was, however, decided that both parametric and non-parametric statistics be used. Although non-normally distributed data violates the assumption of normality, Pallant (2020) notes that parametric techniques are often robust enough and able to tolerate the violation of the normality assumptions, provided the sample size is large enough. Given that the present study's sample is relatively large ($n=660$), non-normality should be less of a concern. However, both were conducted and compared to observe potential differences between the outcomes of the parametric and non-parametric tests.

Estimating the relationship between Pay Disparity and Organisational Performance

Given the nature of the research question, which attempts to assess the relationship between the independent and dependent variables, tests of association were conducted. Bivariate and multiple regression analyses were conducted after all assumptions were met.

Bivariate Analysis

As suggested above, both Spearman's rank correlation (r_s) and Pearson's correlations coefficient (r) were computed (i.e., a non-parametric and parametric statistic, respectively) to

assess the relationship between pay disparity and organisational performance amongst JSE listed organisations.

Bivariate correlation analyses were firstly conducted using the data from the overall sample, followed by splitting the data by the relevant years and sector (see Table 4.7 below).

The strength of significant correlation coefficients were qualitatively judged using Cohen (1988) suggestion for narrative guidelines when interpreting the strength of the correlations between variables. Cohen's (1989) guidelines are:

- Small/low ($r = .10$ to $.29$)
- Medium/moderate ($r = .30$ to $.49$)
- Large/strong ($r = .50$ to 1.0).

Table 4.7

Overall Correlation Between Pay Disparity Multiples and Organisational Performance Indicators based on Spearman's Rho

		Total COE Multiple ²	Total COE (COE+ STI) Multiple ³	Total Rem (COE+STI+LTI) Multiple ⁴
EBITDA	Corr Coef (r)	.30**	.43**	.49**
	Sig. (2-tailed)	.000	.000	.000
	n ¹	599	599	599
EVA	Corr Coef (r)	.09*	.16**	.19**
	Sig. (2-tailed)	.019	.000	.000
	n	660	660	660
Price / EBITDA Ratio	Corr Coef (r)	.08*	.09*	.09*
	Sig. (2-tailed)	.037	.035	.026
	n	625	625	625
ROI	Corr Coef (r)	.16**	.12**	.07
	Sig. (2-tailed)	.000	.007	.095
	n	539	539	539
ROA	Corr Coef (r)	.09*	.09*	.09*
	Sig. (2-tailed)	.020	.026	.019
	n	625	625	625

* $p < 0.05$, ** $p < 0.01$

¹Sample size for the various organisational performance measures differ because all organisations do not report the same performance indicators

²Total COE Multiple = the pay disparity multiple using base pay; ³COE+STI Multiple = the pay disparity multiple of the base salary, including short term incentives; ⁴Total Rem Multiple = the pay disparity multiple using total remuneration

EBITDA was found to have the most consistent results throughout the analysis when observing the years separately, with the largest statistically significant correlation coefficients compared to the other performance indicators (see Tables B1, B2, B3, and B4 in Appendix B). Similar results were found when analysing the years wholly, as seen in Table 4.7 below.

EVA ($r_s(596) = .19, p < .01$), the Price/EBITDA ratio ($r_s(621) = .09, p < .01$), ROA ($r_s(621) = .09, p < .05$) all displayed correlation coefficients smaller than $r = .3$ when observing the total remuneration multiple, which suggests small correlations between pay disparity and all performance indicators, besides EBITDA ($r_s(597) = .49, p < .01$), which was found to be strongly related. No significant correlation was found between ROI and the total remuneration disparity ratio ($r_s(537) = .07, p > .05$), however, the total COE ($r_s(537) = .16, p < .05$), and COE + STI ($r_s(537) = .12, p < .01$), ratios had a significant, albeit weak correlation with ROI. No significant correlation between the total remuneration multiple and ROI indicates no relationship between pay disparity, as measured by the total remuneration multiple, and the organisations' return on investments.

The Pearson correlation coefficients (see Table 4.8 below) differ significantly from that obtained from the non-parametric statistic of association, Spearman's *rho* (see Table 4.7 above).

Table 4.8

Overall Correlation Between Pay Disparity Multiples and Organisational Performance Indicators Using Pearson's Correlation Coefficient

		Total COE Multiple ¹	Total COE (including STI) Multiple ²	Total Remun Multiple ³
EBITDA	<i>r</i>	.15**	.22**	.25**
	<i>Sig. (2-tailed)</i>	.000	.000	.000
	<i>n</i>	599	599	599
EVA	<i>r</i>	-.01	-.01	.000
	<i>Sig. (2-tailed)</i>	.723	.771	.996
	<i>n</i>	660	660	660
Price/EBITDA ratio	<i>r</i>	-.01	-.01	-.01
	<i>Sig. (2-tailed)</i>	.748	.842	.863
	<i>n</i>	625	625	625
ROI	<i>r</i>	-.01	-.01	-.02
	<i>Sig. (2-tailed)</i>	.898	.774	.663
	<i>n</i>	539	539	539
ROA	<i>r</i>	.06	.07	.07
	<i>Sig. (2-tailed)</i>	.143	.079	.081
	<i>n</i>	625	625	625

** . Correlation is significant at the 0.01 level (2-tailed).

¹Total COE Multiple = the pay disparity multiple using base pay; ²COE+STI Multiple = the pay disparity multiple of the base salary, including short term incentives; ³Total Rem Multiple = the pay disparity multiple using total remuneration (total COE+STIs+LTIs)

EBITDA is the only measure of performance that was found to have a statistically significant relationship ($p < 0.01$) between pay disparity and organisational performance. However, these relationships are weaker than what was suggested by Spearman's rank coefficient, where the total COE multiple ($r(597) = .15, p = <.001$), COE+STI multiple ($r(597) = .22, p = <.001$), and total remuneration multiple ($r(597) = .25, p = <.001$), found to have a small positive correlation with organisational performance. All other accounting measures of organisational performance were not found to be statistically significantly related to pay disparity. The difference in results from the parametric (Pearson's) and non-parametric (Spearman's) outputs suggests that the assumption of normality may affect the accuracy of results. However, the results of both analyses of association, i.e., based on the assumption of normally and not-normally distributed data, indicated that pay disparity was statistically significantly positively related to organisational accounting performance when EBITDA was used as the measure of organisational performance.

Next, the relationship between the variables was estimated based on the data collected for each year. Across all the years (i.e., 2017 to 2022), statistically significant positive relationships between pay disparity and selected organisational accounting performance indicators were found. The statistically significant positive relationship was found between pay disparity (based on total remuneration (COE+STIs+LTIs) and EBITDA in 2017 ($r_s(149) = .56, p <.01$); followed by the same relationship in 2018 ($r_s(124) = .52, p <.01$); in 2019 ($r_s(147) = .44, p <.01$) and in 2020 ($r_s(166) = .44, p <.01$). This indicates that throughout the period 2017 to 2020, a moderate and positive relationship between pay disparity and organisational performance as measured by EBITDA. In contrast, the executives total COE and COE + STI's displayed weaker relationships with organisational accounting performance when measured using EBITDA. This result suggests that the larger the pay disparity is between the executive team and the average employee, the better the organisation is most likely to perform – and *vice versa*.

When observing the years separately, the results showed that COE + STI's and Total remuneration PGRs correlated stronger and had more incidents of significant results than total

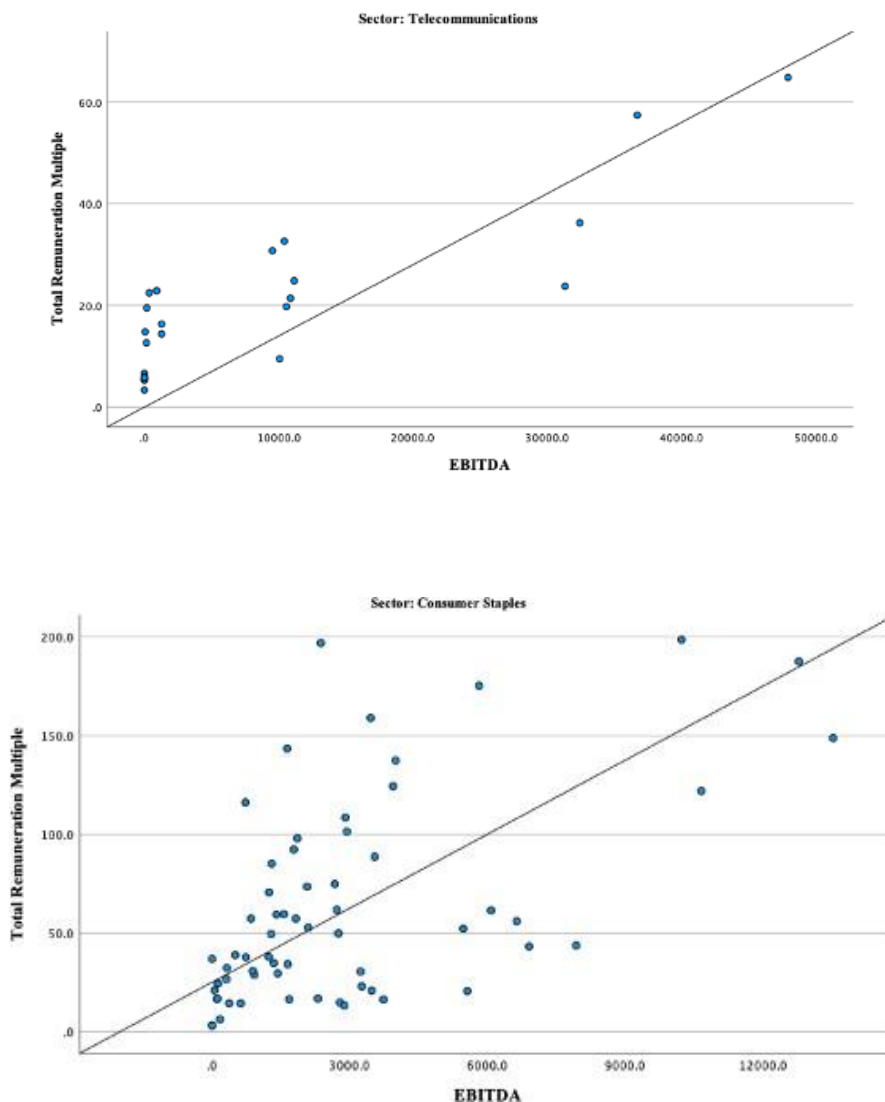
COE in all instances. STI's and LTI's significantly increase the pay gap ratio, which correlates with higher organisational performance as measured by EBITDA, indicating that the additional benefits that executives receive have a stronger relationship with organisational performance.

Finally, correlations were split by sector (See Table C1 in Appendix C). The Energy, Healthcare and Technology sectors were the only sectors with no significant correlations between pay disparity and any of the organisational accounting performance indicators. The finance ($r_s(57) = .37, p < .01$), consumer staples ($r_s(58) = .51, p < .01$), industrials ($r_s(129) = .31, p < .01$), basic materials ($r_s(69) = .49, p < .01$), and real estate ($r_s(67) = .39, p < .01$) sectors displayed moderate relationships between pay disparity and organisational performance when considering the total remuneration multiple. The total COE multiple, which is the multiple using the guaranteed base salary of executives only, produced less significant relationships than the COE+STI and total remuneration multiples. This insignificant result is seen in the basic materials ($r_s(77) = .19, p > .05$), financial ($r_s(57) = .22, p > .05$), industrial ($r_s(129) = -.01, p > .05$) and real estate ($r_s(69) = .19, p > .05$) sectors. It is important to mention that although the relationship between pay disparity, measured by the total COE and organisational performance, was not statistically significant, the relationship between pay disparity as measured by the COE+STI and total remuneration multiple and organisational accounting performance was significant. This result indicates that for the basic materials, financial, industrial, and real estate sectors, pay disparity as measured only by the total COE multiple has no relationship with the organisation's performance.

The scatter plots in Figure 4.4 below display the relationship direction and strength of the relationship between pay disparity and organisational performance as measured by EBITDA for the telecommunication and consumer staples sectors.

Figure 4.4

Spearman's Rho Correlation for the Telecommunications and Consumer Staples Sectors



The Telecommunications sector ($r_s(20) = .89, p < .01$), had the strongest positive correlation between pay disparity in terms of total remuneration pay gap ratio and the performance indicator EBITDA, followed by the Consumer Staples sector ($r_s(60) = .51, p < .01$). These results indicate that for these two sectors specifically, pay disparity has a stronger positive relationship between pay disparity and organisational performance.

Results differed slightly when observing Pearson's correlation coefficients instead of Spearman's (see Table C2 in Appendix C). The major difference is that the basic materials and financial sectors had no significant relationships between pay disparity, as measured by all PGR's and organisational performance. However, based on Spearman's rank coefficient, these

two sectors had a moderate relationship between the two variables. Furthermore, the consumer staples ($r(60) = .62, p = <.01$) and consumer discretionary ($r(90) = .60, p = <.01$) sectors displayed a stronger positive relationship between total COE and organisational performance than the total remuneration multiple, which is different to the other sectors. This suggests that pay disparity, as measured by the total COE, has a stronger positive relationship than pay disparity measured by total remuneration in this sample. It would seem that employees are more motivated when pay disparity in terms of total COE is higher than pay disparity as measured by total remuneration. All other results remained similar: the healthcare, technology and energy sectors displayed no relationship between pay disparity and organisational performance, and the telecommunications sector had the strongest relationship between the two variables in terms of the total remuneration multiple ($r(22) = .86, p = <.01$).

Due to the differences between Spearman's rank and Pearson's correlation coefficients, it is suggested that the outputs for Spearman's ρ be accepted, as this is a non-parametric statistic and non-normally distributed data does violate any assumption of this statistic. The results displayed no significant negative correlations between pay disparity and organisational performance indicators as hypothesised, suggesting that the null hypothesis be upheld.

Multivariate Results

Multiple regression analyses were conducted to predict organisational performance, as measured by EBITDA, based on the Total COE, COE + STI and Total Remuneration (COE + STI + LTI) PGR. All assumptions of multiple regression were met, including checking outliers, normality, linearity, homoscedasticity, independence of residuals and multicollinearity (see Figure D1, D2 and D3 in Appendix D), after the variables were log-transformed. The variables were log-transformed as the data set, in terms of the PGRs, were highly skewed and needed to be normalised (Field, 2018). The model summary, coefficient table and ANOVA output for the multiple regression are displayed and interpreted below.

Table 4.9*Model Summary of Multiple Regression*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.59 ^a	.34	.34	.67	1.99

a. Predictors: (Constant), Total remuneration multiple (trf), Total COE multiple (trf), COE+STI multiple (trf)

b. Dependent Variable: EBITDA

As seen in Table 4.9 above, the data met the assumption of independent errors (Durban-Watson =1.99), suggesting there was no autocorrelation. The R² ratio indicates that 34% of the variance in EBITDA is explained by pay disparity in the sample, which is considered to be moderate. According to Falk and Miller (1992) and supported by Field (2018), an R² value higher than .20 is considered good for studies in the Social Sciences. Furthermore, the standard error of the estimate (*SEE* = .68) is smaller than 0 and not close to the standard deviation of EBITDA (*SD* = 6923.84), indicating that the model is strong and significant in making predictions about the relationship between pay disparity and organisational performance as measured by EBITDA.

Table 4.10*Multiple Regression Coefficients Table*

Model	Unstandardized		Standardized			Collinearity				
	Coefficients		Coefficients			Correlations			Statistics	
	B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	1.64	.09		17.54	.000					
Total COE Multiple¹	-1.66	.21	-.809	-7.95	.000	.31	-.33	-.28	.12	8.35
COE_STI Multiple²	.45	.34	.224	1.34	.181	.44	.06	.05	.14	6.69
Total rem Multiple³	1.84	.25	1.005	7.45	.000	.49	.31	.26	.17	7.71

a. Dependent Variable: TrfEbida

¹Total COE Multiple = the pay disparity multiple using base pay; ²COE+STI Multiple = the pay disparity multiple of the base salary, including short term incentives; ³Total Rem Multiple = the pay disparity multiple using total remuneration

As seen in Table 4.10, tests were conducted to ensure the assumption of collinearity was met and multicollinearity was not a concern (Total COE PGR, Tolerance = .12, VIF = 8.38; COE_STI multiple, Tolerance = .14, VIF = 6.69; Total remuneration PGR, Tolerance = .17,

VIF = 7.71). The coefficients tables indicate that disparity measured by total COE ($p < .001$) and total remuneration ($p < .001$) make a unique contribution to the prediction of organisational performance as measured by EBITDA. Pay disparity as measured by the total COE, including STI's, did not significantly contribute to the prediction of organisational performance ($p = .18$). The value of EBITDA is 1.64 if there is no pay disparity present in the organisation. However, for every increase in pay disparity as measured by total COE multiple, EBITDA will decrease by 1.68. An increase in pay disparity as measured by the total remuneration multiple, EBITDA will increase 1.84. The COE+STI multiple was not significant, indicating that it has no effect on EBITDA.

Thus, given the above information from Table 4.8, the following equation was produced from the analysis:

Organisational performance as measured by EBITDA = constant (1.64) + (-1.68 total COE multiple) + (1.84 total remuneration multiple).

Table 4.11

ANOVA Output for Multiple Regression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	126.355	3	42.118	92.075	.000 ^b
	Residual	242.898	531	.457		
	Total	369.253	534			

a. Dependent Variable: TrfEbida

b. Predictors: (Constant), TrfToyrem, TrfTotCOE, TrfCOE_STI

The ANOVA table (Table 4.11 above) signifies whether the regression model is a good fit for the data (Field, 2018). Table 4.11 shows that the PGR's (independent variable) statistically significantly predicts organisational performance as measured by EBITDA, $F(3, 531) = 92.075$, $p < .001$, suggesting that the regression model is a good fit for the data.

Conclusion

Overall, the results indicate that there was a difference between parametric and non-parametric correlation tests. Since the data is not normally distributed, the results obtained from a non-parametric test, Spearman's Rank Correlation, were interpreted. The results show a moderate to strong relationship between pay disparity and organisational performance, as measured by EBITDA. The healthcare, technology and energy sectors showed no significant relationship between pay disparity and organisational performance. Contrastingly, the telecommunications sector showed the strongest positive relationship between the variables in question. Lastly, the multiple regression showed that only the total COE and total remuneration PGR had significant effects on organisational performance and that the model used to determine these effects was significant.

CHAPTER 5

DISCUSSION

Correlation coefficients were calculated to estimate the strength of the relationship between pay disparity and organisational accounting performance. The relationship was further investigated using linear regression analysis. The results from the statistical analyses reported in Chapter 4 are discussed in this chapter in relation to the current literature on the topic. Furthermore, the implications of the results will be discussed here and the theoretical and practical contribution of the present research study.

Differences in Executive Pay amongst selected JSE listed companies

The results obtained from the empirical study indicate that the differences in fixed pay amongst the selected organisations JSE listed companies (n=660) were relatively similar, with few anomalies being present (based on outliers identified using Tukey's greater than two standard deviations from the median). This suggests that remuneration managers and REMCOMs, following remuneration policies and best practice guidelines, consistently set market-related executive pay. Shareholders casting anonymous votes for or against remuneration policies may further explain this consistency across so many listed companies (Armstrong & Murlis, 2007). Some authors have also argued that remuneration guidelines have made remuneration more transparent. As a result, there has been a regression to the mean, i.e., executives demanding similar salaries to other executives in the same position as they are.

The relative consistency in the fixed pay or guaranteed packages executives earn, based on job evaluation methods that align their roles to market-related salaries, seems to have resulted in reasonably expected levels of pay disparity.

A different situation, however, emerges when the variable pay, i.e. short-term and long-term incentives, of executives are considered. The variable pay executives earn typically greatly increases pay disparity with many anomalies being observed, i.e. there are many executives earning salaries that are substantially above the norm (this is based on outliers that were identified using Tukey's greater than two standard deviations from the median). The results

supports the findings of Bussin (2018) that executives earn up to three times their fixed pay in STI's and LTI's.

Van Wyk and Wesson (2021) suggested that variable pay is often high, as executives are incentivised by LTI and STI schemes to execute strategies and make decisions that bring about high levels of individual and organisational performance, profitability, sustainable success, as well as increased shareholder value. A greater proportion of executive pay is typically at risk and executives who do not perform at the required levels stand to receive no bonuses; however, when they do meet their targets or strategic objectives, the rewards for doing so are often substantial.

The Relationship between Pay Disparity and Organisational Performance

The link between high performance and high incentive values, described above, is most likely why a statistically significant positive relationship between pay disparity and organisational performance was found. In other words, for executives to receive their variable pay, their organisation needs to meet performance standards (Bussin, 2015). This point is supported by the results of the multiple regression analyses, which supports the notion that an increase in levels of pay disparity, as when based on total remuneration, statistically significantly explains variance in the dependant variable organisational accounting performance when being measured using EBITDA.

Contrastingly, based on the linear multiple regression results, it was found that pay disparity when based on fixed or guaranteed pay statistically significantly explains the variance in EBITDA, but in a negative relationship (i.e. based on a negative standardised Beta coefficient). This suggests that an increase in pay disparity based on the guaranteed package an executive can expect may explain a decrease in organisational performance.

It is, therefore, suggested that executives who are offered higher levels of fixed or guaranteed pay without placing more of their pay at risk (i.e., being performance-linked) may lead to a situation where they are more complacent and less motivated to ensure the performance expectations of the organisation are met, given that they are practically guaranteed to receive the salary regardless of their performance. This result corroborates a study by Bun and Huberts (2018), who found a similar result when investigating the impact of higher fixed pay and lower

performance bonuses on organisational performance. Their results indicated that productivity is likely to decrease the more pay structures shift to fixed pay and away from pay-at-risk.

The results and conclusions described above support the tenants of sound incentive-based pay design and should motivate remuneration managers, members of REMCOMs and shareholders to hold executives accountable for their performance. Unless a bonus payout is so large as to draw attention, for example, an article was published on MoneyWeb with the title “Whitey Basson pockets R100m” referring to a bonus Shoprite had paid him, it is more often large fixed or guaranteed packages that draw the attention.

The results obtained from the presented study, described above, are consistent with tournament theory which states that employees will be motivated to progress within the organisation when the pay disparity between the executives and employees is larger, therefore prompting them to perform better to reach their goal (Lazear & Rosen, 1981). This notion found support in several studies (for example, Bun & Huberts, 2018; Henderson & Fredrickson, 2017).

Similarly to Henderson and Fredrickson’s (2017) results, Pissaris, Jeffus and Gleason (2010) also found that pay disparity had positive effects on organisational performance amongst firms in the U.S; however, the model gained more explanatory power when a corporate governance interaction model was included in the equation. Mobbs and Raheja (2012) also found that organisations with numerous candidates competing for a promotion perform better than organisations that groom employees for promotion, which usually occur within smaller businesses. The organisations sampled in the present study have many employees, which result in more than one employee competing for promotions. This may persuade employees to work harder and perform better to be promoted and earn better, resulting in greater performance by the organisation.

However, the results are mixed, suggesting that the relationship between pay disparity and organisational performance is not as straightforward as initially thought.

In their work on top-management-to-worker pay disparity, Connelly et al. (2016) found support for a positive relationship between CEO pay disparity and organisational performance in the short term, suggesting a short-term benefit of CEO pay disparity for organisations, supporting the views expressed above. However, they found a negative relationship when this relationship was considered over the longer term. Similarly, Dai et al. (2017) and Mahy et al. (2011) found an inverted U function when investigating the relationship between pay disparity and

organisational performance, where the positive effects of pay disparity are present when the level of pay disparity is below the optimal level, and the negative effects of pay disparity presenting themselves when pay disparity is above the optimal level. However, this notion could not be investigated in the current study, given that only four years of data were used, which can be considered short-term. This result may have been corroborated if data had been collected for a longer term.

The role Economic Sector plays in the relationship between Pay disparity and organisational performance:

The results displayed no significant relationship between pay disparity and organisational performance in the Energy, Healthcare and Technology sectors of the economy. This finding corroborates that of Hibbs and Locking's (2000), who also found no significant relationship between pay disparity and organisational performance. This non-significant relationship may be explained by the nature of work and the type of individuals working within these sectors. All three sectors, i.e., Energy, Healthcare and Technology, require knowledge workers who get paid according to their value to the organisation. These three sectors also had the lowest PGR of all the sectors. This low PGR implies that the pay gap between the executive team remuneration and that of the employees does not concern and has no effect on employee behaviour, thus not affecting the organisation's performance.

Despite employee education and higher salaries, Mayosi and Benatar (2014) found that many private healthcare facilities in South Africa hire their employees on a contract basis. For example, nurses in some hospitals belong to a private nursing agency (a labour broker) and their services are hired out to hospitals on a part-time basis. Locum nursing staff often earn higher salaries than those in full-time employment. Being slightly removed from the organisation they can, if dissatisfied about any aspect of their work, address it with their agency and not the organisation. The same goes for locum doctors within the private health sector. Usually, doctors rent rooms within the hospital for a monthly fee. Here, doctors get paid according to how often they work in the hospital, and even though some doctors may have a slow month, the hospital still gets paid for renting out their room – which does not affect their performance. Therefore, the result of no significance between pay disparity and organisational performance within the healthcare sector holds.

Contrastingly to the energy, healthcare and technology sectors, the telecommunications sector had the strongest relationship between pay disparity and organisational performance, albeit a positive relationship. The telecommunications sector employs Information Technology (IT) professionals, telecommunication technicians, sales managers, engineers, programmers, digital marketers, project managers and data analysts, to name a few. These roles require specific degrees, making telecommunication employees well educated and in demand, as the telecommunications industry has boomed over the recent years with suitable candidates in short supply (Nalubega, Kasumba & Uwizeyimana, 2019). Businesses within the telecommunications sector often have numerous opportunities for career progression and growth, as long-term careers within this sector are encouraged, given the shortage of suitable candidates. Given the nature of the sector, employees are paid reasonably well (the third-best paid sector in the sample) and often have opportunities to ‘climb the ladder’ within their organisation, motivating them to work harder to progress within the organisation, possibly explaining the strong positive correlation between pay disparity and organisational performance through tournament theory (Przychodzen & Gómez-Bezares, 2021).

Furthermore, the telecommunications sector is currently growing at an exponential rate as the demand for faster internet networks in the form of fibre has grown (Moyo & Munoriyarwa, 2021). Recently, more employees are working from home and require telecom devices and efficient internet. The popularity of the telecommunications sector means that they will perform financially regardless of how their employees perform in the organisation itself. It is important to note that the pay gap ratios for the telecommunications sector were some of the lowest, indicating that employees are paid reasonably well when compared to their employees.

Regarding the performance of certain sectors, the consumer staples sector will more often than not perform financially, as there is a demand for the products the organisations provide. Most of the population needs to buy food products to survive; therefore, they purchase from organisations like Shoprite, Woolworths, and Checkers. Former CIO of Coronation, Louis Stassen, notes that the consumer staples sector produce essential food products that remain in demand despite economic difficulties. Furthermore, he states that organisations in this sector have some of the best management teams, backing from strong global brands and resilient business models. Therefore, even if employees had negative attitudes towards their employers and decided to not perform, these organisations have a strong system in place to ensure they still perform optimally.

Furthermore, the consumer staples and consumer discretionary sectors include organisations that have numerous opportunities for growth, increasing the competitive nature of the workplace. Furthermore, organisations that have higher average salaries and more employees often experience higher productivity gains even though the pay disparity gap is large in comparison to organisations with lower employee salaries (Przychodzen and Gómez-Bezares, 2021). This is evident in the financial sector, where many employees are paid larger salaries than the average employee in other sectors. The results show that the financial sector is the second-highest paying sector, after the Real estate sector. Due to the high average salaries' employees are paid, as well as the number of employees in financial institutions (the second largest in the sample), it is not surprising that there was a moderately positive and significant relationship between pay disparity and organisational performance.

The basic materials sector, which includes mining industries, also displayed a positive effect of pay disparity on organisational performance. The basic materials sector was the main sector where a negative relationship was expected due to the low wages and working conditions experienced by workers. Furthermore, the basic materials sector has the largest incidents of strikes by workers against their organisations. Therefore, the positive and significant relationship between pay disparity and organisational performance was unexpected. In the sample, the basic materials sector had a good average salary for employees, where the average salary was approximately R25,000 per month. This is significantly higher than the minimum wage in South Africa, which is, as of 2022, around R4,000 a month. Furthermore, the basic materials sector may be performing well, despite instances of larger pay disparity, because of recent international investing interests from countries like China and Russia (BussinessTech, 2021). These international countries are investing money in South Africa's basic materials sector due to the high demand for natural resources, which increases the value and consequently the performance of the organisation despite potential behavioural consequences that pay disparity may elicit.

The real-estate sector also displayed a positive and significant relationship between pay disparity and organisational performance, albeit moderate. In the real-estate sector, employees often must perform well in order to sell houses. These employees work on a commission basis, and if they are not performing, they will not earn a salary. Often, the executives of real estate companies are head real estate brokers and collect fees and commission split from agents they manage (Truebestein, 2011). Thus, executive remuneration is often derived from what

employees make. Employees in this sector may perceive this as fair and have a positive attitude towards their work because the effort they put in at work is directly related to more money.

Despite the current study's result confirming the results of tournament theory literature, the result was not expected in the South African context, given the country's history of strikes against minimum wage and unfair pay disparities. The following section will discuss the possible reasons why this research study's result contradicts South African literature, albeit limited, on pay disparity and organisational performance. It is important to note that most of the South African literature on pay disparity has focused solely on CEO pay disparity. This research study is the first that includes the whole executive team and not just the CEO.

South Africa's High Unemployment Rate

The studies which found a negative and significant relationship between pay disparity were predominantly conducted in the global north in countries such as Canada, the United States, the U.K, and Asia. This may be because of the higher employment opportunities employees have if they decide to leave their current work due to negative attitudes towards their employer. According to The Global Economy.com, as of 2022, Canada (5.67%), China (3.70%), the U.K (5.01%) and the U.S (3.53%) have exponentially lower unemployment rates than that of South Africa, which currently has the highest unemployment rate globally (34.38%).

Employees fear retrenchment, as this may lead to them not being able to provide for themselves or their families (Van der Westhuizen & Swart, 2015). The fear of unemployment and retrenchment may force employees to perform regardless of how they perceive their pay compared to their executives, because in their mind, at least they have a salary. Lucky, Minai and Rahman (2013) found that job security was increasingly important to employees and had a positive relationship with organisational performance. The importance of job security was supported by results from the South African Social Attitudes Survey in 2005, where 99 percent of the 2 884 respondents said job security was the most important attribute of their job. High income was the fourth most important attribute, after opportunities for advancement and having an interesting job. Moshoeu and Geldenhuys (2015) argue that the fear of unemployment may motivate employees to engage in behaviour that will allow them to cope with and avoid the threat of job loss. Similarly, Mauno et al. (2005) note that employees may believe that by increasing their performance, they may lower the likelihood of losing their job. Thus, given

South Africa's unemployment climate, employees of organisations from the current study's sample may be motivated to perform regardless of their attitudes towards the executive-employee pay gap. The motivation to perform regardless of pay disparity corresponds with Maslow's Hierarchy of Needs, as employees are motivated to work in order to meet the first two needs set out by Maslow, namely physiological needs and safety needs, which are fundamental to fulfil before being motivated to reach other levels (Lester, 2013; Maslow, 1943). For the reason above, it is possible that generally, employees do not care what their executives are earning, because at least they are receiving a salary that will support them in meeting their basic needs.

The Influence of Employees in Hindering Organisational Performance

Business models are designed to ensure that organisations perform when certain functions are performed. This does not necessarily mean that these functions need to be performed well, just that they need to be completed (Teece, 2010). For example, a teller at a food store has a function to scan the food, receive payment from the customer and pack the bag in which the food gets carried. If they perform this function well, customers are more likely to go shopping at that store again. However, if the employee puts in as little effort as possible, the job is still getting done and contributing to the organisation's performance. Therefore, it is important to identify which employees are more important in ensuring the organisation performs optimally. For example, the individual who sources products to be sold in the store (commonly known as a 'buyer') has a larger impact on the performance of the organisation than the food teller (Teece, 2010). If the buyer has negative attitudes towards their executive pay, they are more likely to affect the performance of the organisation. Yet, the buyer is likely to be paid a lot more than the food teller, as explained by the theories of pay dispersion as explained in Chapter 2. For example, marginal productivity theory states that those who add more value to the organisational will consequently get paid more. Arguably, the buyer provides more value to the organisation than the teller; thus, they get paid more. Consequently, the buyer is less likely to have a negative disposition towards pay disparity, as they are paid more than the teller. Hence, it is important to consider the impact certain jobs have on the organisation.

Various studies have used different performance metrics, while the present study used similar indicators to measure organisational performance. However, the nature of the main performance indicator used in the study could have skewed results to some degree.

The Nature of the EBITDA Metric

The EBITDA metric looks at the earnings of the organisation before the interest, taxes, depreciation, and amortization is subtracted from the organisation's profits. According to Bouwens, De Kok and Verriest (2019), EBITDA is often misused by organisations to make their earnings appear greater than what they accurately are. Some organisations may have a high EBITDA but have debt and therefore must pay off a large amount of interest. If this is considered, perhaps the organisation's performance is not as high as originally believed. For example, the basic materials sector uses large machinery and vehicles that they may have to pay off, repair or replace. When not considering these factors, many organisations will have high earnings and may give the illusion that they are performing well. The other performance indicators used in the analysis, which includes EVA, ROA, ROI and Price/EBITA, did not indicate a large relationship between pay disparity and organisational performance, albeit significant. This indicates that there may not be a moderate relationship between pay disparity and organisational performance when considering all the performance indicators.

Limitations and Suggestions for future research

While the present study's sample reported pay disparity medians below the optimal level, based on Drucker's (1977; 2016) optimal level of pay disparity being 25 times, may explain the positive relationship between pay disparity and organisational performance that was found. Arguably the data collected for the purposes of the current study could be considered short-term data (four years between 2017-2020), suggesting that organisations may have made an effort to ensure fairer and more equal pay, especially since there has been increasing scrutiny placed on the salary packages offered to executives. If data was collected over the longer term, perhaps the past 10 years, it can be speculated that a non-linear relationship may be observed too. It is, therefore, recommended that those who conduct studies of this nature in the future collect data for a longer period of time.

Rouen (2020) when investigating the relationship between CEO pay disparity and organisational performance differentiated explained and unexplained pay disparity. The present study, however, did not make this differentiation due to the resource constraints and data availability precluding such an approach. Rouen (2020) found evidence for a positive relationship between explained pay disparity and organisational performance, however, he

found a negative relationship between unexplained pay disparity and organisational performance. The results of the current study are similar to Rouen's (2020) when exploring explained pay disparity, i.e., the difference between executive and average employee pay explained by economic factors. These economic factors include how well the organisation is performing, how well the executive performed, and the economy in which the sector finds itself in (is the consumer staples sector doing well, for example). Since organisations listed on the JSE are required to disclose their executive remuneration, it is expected that executives are remunerated according to economic and performance factors, thus limiting the amount of unexplained remuneration and explaining the existing pay disparity. If the pay disparity between executives and their employees is explained, then the result of the present study is in line with that of Rouen (2020). Future studies conducted within the South African or developing economy context should differentiate between explained and unexplained pay disparity. Doing so would provide a more complete understanding of the effect pay disparity has on organisational performance.

The data collected for the purposes of the current study, being limited to four years, did not provide enough data to conduct a time-series analysis, which would have allowed one to observe whether there are trends in the relationship between pay disparity and performance over time. Observing patterns or trends in the data will provide a more complete understanding of the relationship between the two variables. Further to the above, this is another reason why researchers should consider replicating the present study using long-term data, perhaps 10 or more years.

Furthermore, the current study, as is often the case with studies of this nature, did not account for confounding variables that may impacted the relationship between pay disparity and organisational performance. Some sectors, for example, may have been performing optimally between 2017 and 2020 due to the economy and market-related events unrelated to what was happening within the sector.

Future researchers should also consider using mixed method approaches when conducting research of this nature so that employee perceptions of pay justice or fairness can also be collected. Including perceptions of organisational justice, as relevant to remuneration, would augment the quantitative data and provide researchers with a better understanding of quantitative results.

For the purposes of the present study, the pay gap ratio or pay multiple was calculated using two equations: namely, average employee salary was calculated by dividing the expenses spent on employee salaries and wages, divided by the number of employees in the organisation at the end of the respective financial year; and the average executive remuneration was used by adding all the executive's remuneration divided by the number of executives for the respective organisation. This approach, which circumvents the challenge of obtaining sensitive salary data from organisations, is currently the only way this research can be conducted and provides a 'good enough' estimating of pay disparity. The external and internal validity of research studies of this nature would be significantly bolstered if accurate pay gap ratios were obtained and used in future research.

Contribution

The current research study has made several theoretical and managerial contributions to the current literature regarding the relationship between pay disparity and organisational performance and is discussed below.

Theoretical contribution

This present research study was an attempt to investigate the relationship between pay disparity and organisational performance within the context of a developing economy, which has not yet been done before, given that studies of this nature have all in the past been conducted in the Global North. Moreover, this study, being conducted within a country where pay inequality is at the highest level globally, addresses a crucial gap in the current literature and hopefully positively contribute to this ongoing debate.

This research study further contributed to the existing literature on the relationship between pay disparity and organisational performance by using the average executive team remuneration and not solely CEO remuneration, as previous studies have done before. Using the entire executive team and not just the CEO provides a broader perspective of pay disparity. This research study further provides evidence supporting tournament theory as a theoretical framework that explains the relationship under investigation. By doing so, this study further contributes to the ongoing debate amongst scholars in this field of study as to which approach,

tournament theory that hypothesises a positive relationship or equity theory that hypothesises a negative relationship.

Furthermore, the present study investigated this relationship across various sectors of the economy, which has not been done in previous studies. Comparing the results by sector and observing the large variance in pay disparity supports the proposition put forward in this study that, unlike the one-size-fits-all approach that has been held in the past, future thinking of this relationship should be more nuanced. Hopefully, this study will provide an impetus for future studies that will further investigate this proposed approach, for which there seems already to be potential.

Although it was not a specific objective of the present study, the results obtained provide further empirical support to the field of incentive design and the role STIs and LTIs of those that hold strategic mandates to bring about higher levels of individual and organisational performance, sustainable success, and increased shareholder value.

Managerial contribution

The findings of the present study provide remuneration managers and REMCOMs with evidence-based insights into the importance of incentivising executives to perform better continuously. It also cautions them to not buckle to the pressure aspirant executives place on them to offer them exorbitant salary packages but rather place greater emphasis on discretionary pay that results from achieving results that matter to shareholders and employees that depend on the survival and continued success of their employers.

The fact that pay levels of executive pay and pay disparity based on guaranteed packages has stabilised, most likely due to the introduction of greater transparency, should further reinforce the importance for remuneration managers and REMCOMs to, continue to, follow responsible and ethical practices when setting pay, which has been greatly facilitated by the introduction of codes of practice such as King IV™.

Conclusion

This present research study was an attempt to investigate the relationship between pay disparity and organisational performance within South Africa, a context in which pay disparity is rife. Based on a quantitative, correlational analysis of data obtained for JSE listed companies (n=660), support for a moderate statistically significant positive relationship between pay disparity and organisational performance was found.

Although the results contradict the initial hypothesis proposed for the present study's purposes, the findings provide valuable insights on how competition and the opportunity to progress within the organisations may motivate employees to perform at higher levels. Furthermore, the results show that the median pay disparity has potentially stabilised with the introduction of stricter reporting standards for JSE listed organisations, which should continue to update and regulate its standards. It is hoped that this research study will positively contribute to closing the pay gap where it is not warranted, while where larger pay gaps are warranted, and it may even be of benefit for organisational performance, the full extent of the pay gap is dealt with ethically and responsibly. The suggestion of a mixed-methods approach to the research question may shed some light on the individual perspectives on executive pay disparity by employees. Although there is some evidence to suggest that paying executives more money can result in higher levels of organisational performance, there is a limit to how far this relationship stretches – a limit it seems that some organisations overshot a long time ago and should be called to bring pay disparity back to acceptable levels.

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Appendix A

Figure A1

Distribution of the Total COE Multiple

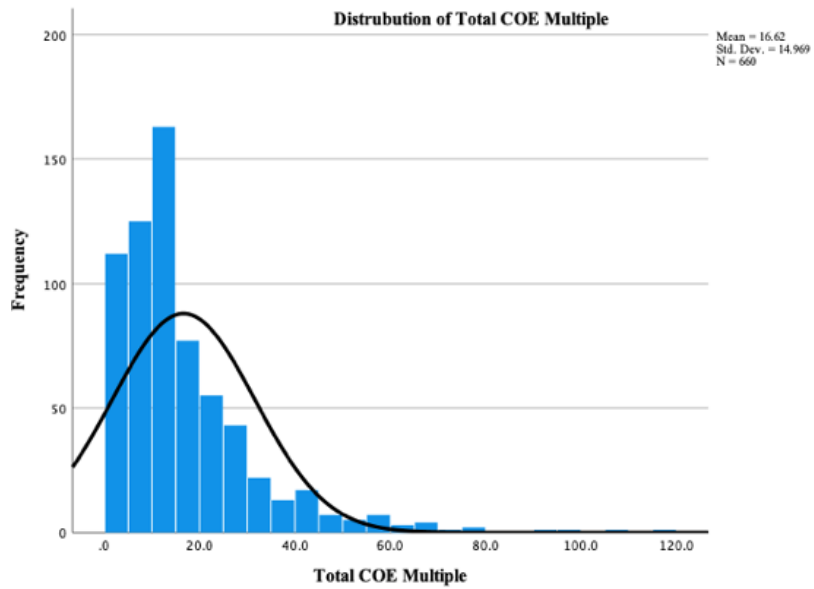


Figure A2

Distribution of the COE+STI Multiple

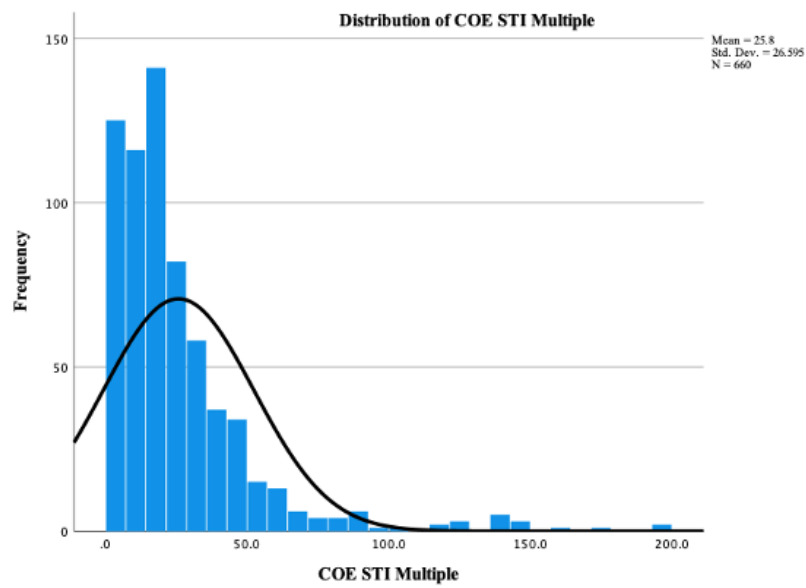
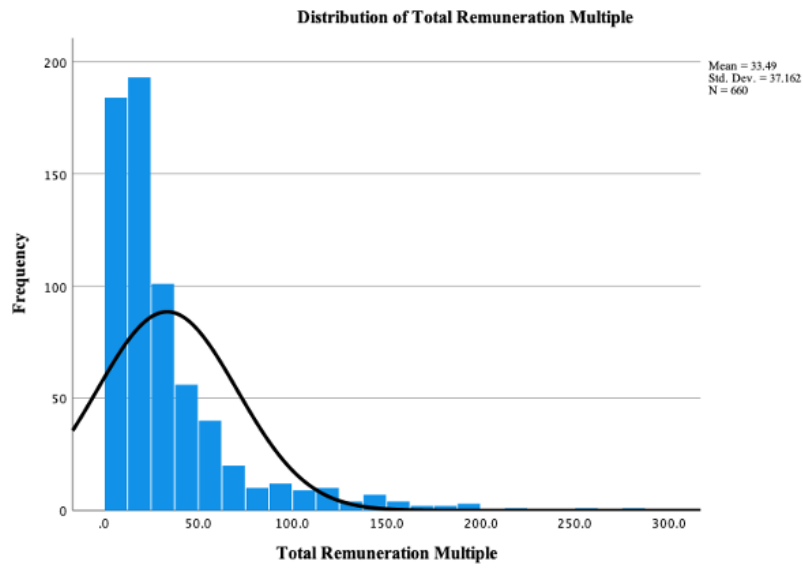


Figure A3

Distribution of the Total Remuneration Multiple



Appendix B

Table B1

Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for 2017

	Financial Year		EBITDA	EVA	Price_EBITDAratio	Return_Avg_External_Investment	ROA
Spearman's rho Total COE Multiple	2017	Correlation Coefficient	.410**	.179*	.240**	.117	.182*
		Sig. (2-tailed)	.000	.020	.002	.175	.022
		n	153	168	159	136	159
COE+STI Multiple	2017	Correlation Coefficient	.512**	.205**	.213**	.057	.129
		Sig. (2-tailed)	.000	.008	.007	.508	.106
		n	153	168	159	136	159
Total Rem Multiple	2017	Correlation Coefficient	.559**	.251**	.211**	.013	.149
		Sig. (2-tailed)	.000	.001	.008	.882	.061
		n	153	168	159	136	159

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table B2*Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for 2018*

	Financial Year		EBITDA	EVA	Price_EBITDAratio	ROI	ROA
Spearman's rho Total COE Multiple	2018	Correlation Coefficient	.314**	.009	.090	.099	.029
		Sig. (2-tailed)	.000	.919	.294	.286	.735
		n	128	144	137	119	137
COE+STI Multiple	2018	Correlation Coefficient	.464**	.017	.081	.024	-.039
		Sig. (2-tailed)	.000	.835	.345	.793	.653
		n	128	144	137	119	137
Total Rem Multiple	2018	Correlation Coefficient	.517**	.023	.095	-.013	-.050
		Sig. (2-tailed)	.000	.787	.269	.889	.562
		n	128	144	137	119	137

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table B3*Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for 2019*

		Financial Year		EBITDA	EVA	Price_EBITDAratiol_Investment	Return_Avg_Externa	ROA
Spearman's rho	Total COE Multiple	2019	Correlation Coefficient	.267**	.108	.051	.149	.113
			Sig. (2-tailed)	.001	.169	.526	.090	.161
			n	150	163	155	131	155
	COE+STI Multiple	2019	Correlation Coefficient	.386**	.177*	.043	.122	.110
			Sig. (2-tailed)	.000	.024	.598	.165	.173
			n	150	163	155	131	155
	Total Remu Multiple	2019	Correlation Coefficient	.444**	.218**	.045	.110	.109
			Sig. (2-tailed)	.000	.005	.575	.212	.176
			n	150	163	155	131	155

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table B4*Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for 2020*

		Financial Year		EBITDA	EVA	Price_EBITDAratio	Return_Avg_External_Investment	ROA
Spearman's rho	Total COE Multiple	2020	Correlation Coefficient	.260**	.131	.085	.271**	.148
			Sig. (2-tailed)	.001	.074	.267	.001	.051
			N	168	185	174	153	174
	COE+STI Multiple	2020	Correlation Coefficient	.363**	.225**	.090	.251**	.183*
			Sig. (2-tailed)	.000	.002	.240	.002	.016
			N	168	185	174	153	174
	Total Remu Multiple	2020	Correlation Coefficient	.443**	.238**	.078	.173*	.178*
			Sig. (2-tailed)	.000	.001	.308	.032	.019
			N	168	185	174	153	174

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix C

Table C1

Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for The Various Sectors

Correlations

Sector			EBITDA	EVA	Price_EBITDAratio	Return_Avg_External_Investment	ROA
Basic Materials	Spearman's rhoTotal COE Multiple	Correlation Coefficient	.192	.055	.077	.030	.022
		Sig. (2-tailed)	.104	.637	.522	.817	.853
		n	73	75	72	61	72
	COE+STI Multiple	Correlation Coefficient	.337**	.191	.144	.010	.165
		Sig. (2-tailed)	.004	.100	.226	.941	.166
		n	73	75	72	61	72
	Total Rem Multiple	Correlation Coefficient	.492**	.340**	.211	.038	.306**
		Sig. (2-tailed)	.000	.003	.075	.768	.009
		n	73	75	72	61	72
Consumer Discretionary	Spearman's rhoTotal COE Multiple	Correlation Coefficient	.594**	.134	-.109	.199	.081
		Sig. (2-tailed)	.000	.204	.325	.091	.466
		n	92	92	84	73	84
	COE+STI Multiple	Correlation Coefficient	.674**	.067	-.103	.217	.036
		Sig. (2-tailed)	.000	.525	.349	.065	.747

		n	92	92	84	73	84	
	Total Rem Multiple	Correlation Coefficient	.688**	.163	-.035	.148	.154	
		Sig. (2-tailed)	.000	.121	.750	.210	.162	
		n	92	92	84	73	84	
Consumer Staples	Spearman's rho	Total COE Multiple	Correlation Coefficient	.405**	.093	.183	.125	.056
			Sig. (2-tailed)	.001	.471	.186	.391	.689
		n	62	62	54	49	54	
	COE+STI Multiple	Correlation Coefficient	.453**	.229	.167	.200	.203	
		Sig. (2-tailed)	.000	.074	.227	.168	.141	
		n	62	62	54	49	54	
	Total Rem Multiple	Correlation Coefficient	.505**	.189	.212	.093	.229	
		Sig. (2-tailed)	.000	.141	.124	.527	.096	
	n	62	62	54	49	54		
Energy	Spearman's rho	Total COE Multiple	Correlation Coefficient	-.143	.000	.214	.400	.214
			Sig. (2-tailed)	.760	1.000	.645	.600	.645
		n	7	7	7	4	7	
	COE+STI Multiple	Correlation Coefficient	.250	.357	.393	.800	.536	
		Sig. (2-tailed)	.589	.432	.383	.200	.215	
		n	7	7	7	4	7	
	Total Rem Multiple	Correlation Coefficient	.571	.464	.679	.000	.607	
		Sig. (2-tailed)	.180	.294	.094	1.000	.148	

		n	7	7	7	4	7	
Financials	Spearman's rhoTotal COE Multiple	Correlation Coefficient	.216	-.009	-.040	.112	-.103	
		Sig. (2-tailed)	.094	.927	.680	.246	.280	
		n	61	112	111	109	111	
	COE+STI Multiple	Correlation Coefficient	.324*	.183	-.121	.182	-.091	
		Sig. (2-tailed)	.011	.054	.207	.058	.341	
		n	61	112	111	109	111	
	Total Rem Multiple	Correlation Coefficient	.369**	.202*	-.177	.183	-.138	
		Sig. (2-tailed)	.003	.032	.063	.057	.149	
		n	61	112	111	109	111	
	Health Care	Spearman's rhoTotal COE Multiple	Correlation Coefficient	-.039	-.040	.131	-.023	.068
			Sig. (2-tailed)	.844	.840	.505	.912	.729
			n	28	28	28	26	28
COE+STI Multiple		Correlation Coefficient	.154	-.077	.312	.028	.059	
		Sig. (2-tailed)	.433	.698	.106	.893	.767	
		n	28	28	28	26	28	
Total Rem Multiple		Correlation Coefficient	.233	.004	.334	-.075	.073	
		Sig. (2-tailed)	.232	.985	.082	.716	.711	
		n	28	28	28	26	28	
Industrials		Spearman's rhoTotal COE Multiple	Correlation Coefficient	-.010	-.046	.080	-.031	.039
			Sig. (2-tailed)	.905	.592	.362	.756	.660

		n	133	136	131	103	131
	COE+STI Multiple	Correlation Coefficient	.237**	-.012	.152	-.115	.058
		Sig. (2-tailed)	.006	.885	.082	.245	.511
		n	133	136	131	103	131
	Total Rem Multiple	Correlation Coefficient	.311**	-.019	.190*	-.197*	.043
		Sig. (2-tailed)	.000	.825	.030	.046	.629
		n	133	136	131	103	131
Real Estate	Spearman's rhoTotal COE Multiple	Correlation Coefficient	.193	-.042	-.018	.276*	.049
		Sig. (2-tailed)	.108	.716	.880	.031	.682
		n	71	76	72	61	72
	COE+STI Multiple	Correlation Coefficient	.317**	-.013	.016	.202	.052
		Sig. (2-tailed)	.007	.909	.894	.118	.665
		n	71	76	72	61	72
	Total Rem Multiple	Correlation Coefficient	.394**	-.033	.032	.177	.081
		Sig. (2-tailed)	.001	.780	.787	.171	.499
		n	71	76	72	61	72
Technology	Spearman's rhoTotal COE Multiple	Correlation Coefficient	.148	-.188	-.124	.133	-.311*
		Sig. (2-tailed)	.315	.201	.421	.427	.040
		n	48	48	44	38	44
	COE+STI Multiple	Correlation Coefficient	.211	-.154	-.065	-.035	-.204

		Sig. (2-tailed)	.149	.295	.674	.834	.184	
		n	48	48	44	38	44	
Total Rem Multiple			Correlation Coefficient	.243	-.089	-.031	-.061	-.170
		Sig. (2-tailed)	.096	.550	.843	.717	.270	
		n	48	48	44	38	44	
Telecommunications	Spearman's rho	Total COE Multiple	Correlation Coefficient	.676**	-.045	-.007	-.443	-.298
			Sig. (2-tailed)	.000	.835	.976	.098	.178
			n	24	24	22	15	22
COE+STI Multiple			Correlation Coefficient	.870**	.037	-.133	-.232	-.225
			Sig. (2-tailed)	.000	.865	.554	.405	.315
			n	24	24	22	15	22
Total Rem Multiple			Correlation Coefficient	.886**	.019	-.132	-.150	-.221
			Sig. (2-tailed)	.000	.929	.558	.594	.322
			n	24	24	22	15	22

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table C2

Pearson's Correlations Between Pay Disparity Multiples and Organisational Performance Indicators for The Various Sectors

Sector			EBITDA	EVA	Price_EBITDAratio	Return_Avg_External_Investment	ROA
Basic Materials	Total COE Multiple	Pearson Correlation	.022	.060	-.013	-.132	.148
		Sig. (2-tailed)	.852	.608	.916	.311	.214
		n	73	75	72	61	72
	COE+STI Multiple	Pearson Correlation	.102	.184	-.003	-.138	.165
		Sig. (2-tailed)	.392	.114	.979	.289	.165
		n	73	75	72	61	72
	Total Rem Multiple	Pearson Correlation	.157	.281*	-.007	-.147	.192
		Sig. (2-tailed)	.185	.015	.955	.258	.107
		n	73	75	72	61	72
Consumer Discretionary	Total COE Multiple	Pearson Correlation	.604**	.021	-.162	-.013	.113
		Sig. (2-tailed)	.000	.844	.141	.910	.304
		n	92	92	84	73	84
	COE+STI Multiple	Pearson Correlation	.646**	.042	-.137	-.055	.025
		Sig. (2-tailed)	.000	.688	.214	.644	.820
		n	92	92	84	73	84
	Total Rem Multiple	Pearson Correlation	.560**	.050	-.081	-.058	.153
		Sig. (2-tailed)	.000	.635	.462	.627	.164

		n	92	92	84	73	84
Consumer Staples	Total COE Multiple	Pearson Correlation	.615**	.152	-.061	.217	-.045
		Sig. (2-tailed)	.000	.239	.664	.134	.746
		n	62	62	54	49	54
	COE+STI Multiple	Pearson Correlation	.553**	.046	.015	.093	.093
		Sig. (2-tailed)	.000	.721	.917	.526	.502
		n	62	62	54	49	54
Total Rem Multiple	Pearson Correlation	.558**	.023	.002	.053	.106	
	Sig. (2-tailed)	.000	.859	.989	.715	.447	
	n	62	62	54	49	54	
Energy	Total COE Multiple	Pearson Correlation	-.236	.040	.396	.276	.277
		Sig. (2-tailed)	.610	.932	.379	.724	.547
		n	7	7	7	4	7
	COE+STI Multiple	Pearson Correlation	-.103	.347	.561	.207	.498
		Sig. (2-tailed)	.826	.445	.190	.793	.256
		n	7	7	7	4	7
Total Rem Multiple	Pearson Correlation	.501	.460	.744	-.551	.624	
	Sig. (2-tailed)	.252	.299	.055	.449	.134	
	n	7	7	7	4	7	
Financials	Total COE Multiple	Pearson Correlation	.184	.010	.030	-.088	-.075
		Sig. (2-tailed)	.156	.917	.752	.364	.431

		n	61	112	111	109	111
	COE+STI Multiple	Pearson Correlation	.182	.068	.012	-.140	-.055
		Sig. (2-tailed)	.160	.479	.899	.146	.566
		n	61	112	111	109	111
	Total Rem Multiple	Pearson Correlation	.198	.112	-.125	-.106	-.107
		Sig. (2-tailed)	.126	.238	.192	.274	.265
		n	61	112	111	109	111
Health Care	Total COE Multiple	Pearson Correlation	-.147	-.563**	-.067	-.074	.022
		Sig. (2-tailed)	.456	.002	.735	.718	.913
		n	28	28	28	26	28
	COE+STI Multiple	Pearson Correlation	-.033	-.566**	.150	-.143	-.077
		Sig. (2-tailed)	.869	.002	.446	.486	.696
		n	28	28	28	26	28
	Total Rem Multiple	Pearson Correlation	.018	-.384*	.157	-.161	-.025
		Sig. (2-tailed)	.928	.043	.426	.433	.898
		n	28	28	28	26	28
Industrials	Total COE Multiple	Pearson Correlation	.231**	-.019	-.159	-.147	-.054
		Sig. (2-tailed)	.007	.828	.070	.139	.544
		n	133	136	131	103	131
	COE+STI Multiple	Pearson Correlation	.502**	-.011	-.143	-.185	-.016
		Sig. (2-tailed)	.000	.897	.104	.062	.857

		n	133	136	131	103	131
	Total Rem Multiple	Pearson Correlation	.597**	-.003	-.122	-.181	-.001
		Sig. (2-tailed)	.000	.972	.166	.068	.992
		n	133	136	131	103	131
Real Estate	Total COE Multiple	Pearson Correlation	.166	.101	.109	.094	.042
		Sig. (2-tailed)	.168	.383	.362	.470	.724
		n	71	76	72	61	72
	COE+STI Multiple	Pearson Correlation	.317**	.123	.132	.093	.074
		Sig. (2-tailed)	.007	.288	.269	.475	.538
		n	71	76	72	61	72
	Total Rem Multiple	Pearson Correlation	.538**	.095	.102	.035	-.028
		Sig. (2-tailed)	.000	.412	.395	.787	.813
		n	71	76	72	61	72
Technology	Total COE Multiple	Pearson Correlation	.131	-.151	-.136	.206	-.061
		Sig. (2-tailed)	.373	.306	.380	.214	.695
		n	48	48	44	38	44
	COE+STI Multiple	Pearson Correlation	.167	-.104	-.057	.014	-.016
		Sig. (2-tailed)	.257	.484	.712	.932	.920
		n	48	48	44	38	44
	Total Rem Multiple	Pearson Correlation	.215	-.037	-.024	-.043	-.010
		Sig. (2-tailed)	.141	.805	.876	.799	.947

		n	48	48	44	38	44
Telecommunications	Total COE Multiple	Pearson Correlation	.554**	.049	-.027	-.353	-.400
		Sig. (2-tailed)	.005	.821	.904	.196	.065
		n	24	24	22	15	22
	COE+STI Multiple	Pearson Correlation	.815**	.130	-.120	-.279	-.206
		Sig. (2-tailed)	.000	.545	.595	.313	.358
		n	24	24	22	15	22
Total Rem Multiple	Pearson Correlation	.862**	.122	-.124	-.273	-.206	
	Sig. (2-tailed)	.000	.571	.583	.325	.358	
	n	24	24	22	15	22	

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix D

Figure D1

Histogram Displaying Normal Distribution of EBITDA Meeting the Multiple Aggression Assumption of Normality

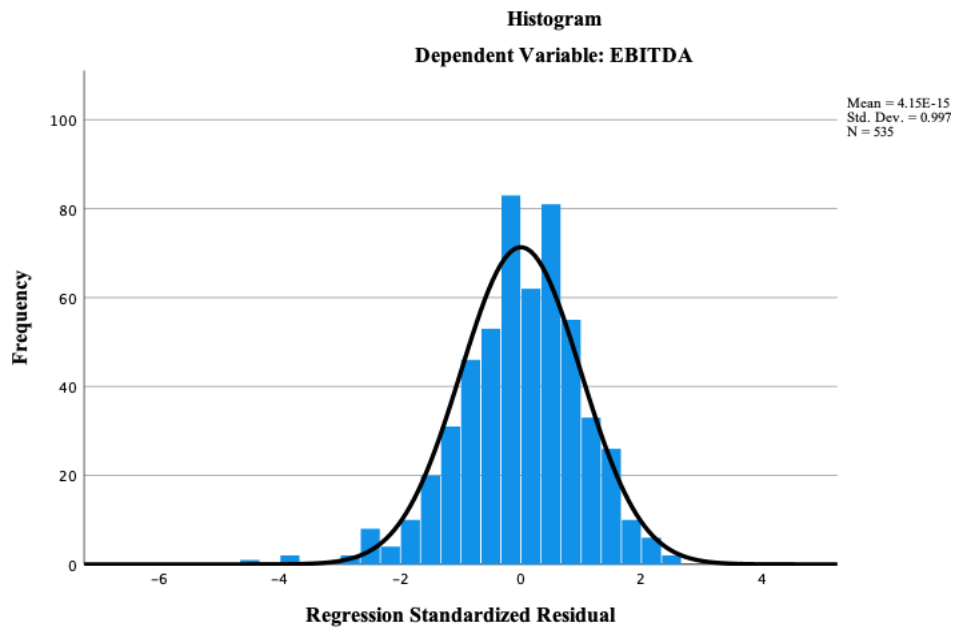


Figure D2

P-P Plot of Regression Displaying the Distribution of Residuals Close to the Line

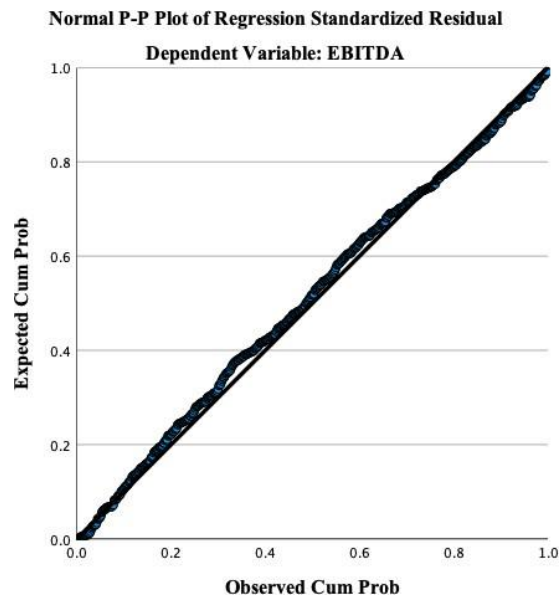


Figure D3

Scatterplot Displaying Random Predicted Values of The Standard Regression Meeting the Multiple Regression Assumption

