Towards a risk attitude mediated framework for corporate governance and firm performance: Recognising the role of unbounded irrationality in decision-making

by

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Towards a risk attitude mediated framework for corporate governance and firm performance: Recognising the role of unbounded irrationality in decision-making

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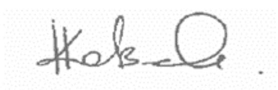
__  __ ______2 November 2023____

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ABSTRACT

Problem statement: Even with the institutionalisation of corporate governance, companies continue to collapse due to poor risk governance. Protecting shareholder value entails an in-depth understanding of the relationship between corporate governance and firm performance. The potential influence of cognitive biases on human rationality in decision-making under risk and uncertainty is often not considered. Individual risk attitudes as shaped by cognitive biases can assist in explaining irrational behaviour in decision-making.

Purpose: The purpose of this study was to develop a corporate governance–firm performance framework that acknowledged the unbounded irrationality of individual risk attitudes.

Methodology: The study adopted an exploratory sequential mixed method design in which seven interviews with industrial psychologists were conducted, followed by a survey of 161 managerial employees in Zimbabwe and South Africa. Serial mediation conditional analysis was conducted to determine the fit of the proposed framework with confirmation using Amos and validated by subject matter experts.

Findings: Theoretically, the study found that literature on corporate governance and firm performance relationship was inconclusive and often assumed a direct causal path. Empirically, the study found that corporate governance and firm performance relationship is influenced by the serial intervention of individual risk attitudes and emotional intelligence, confirming that the relationship is not a simple causal interaction. Personality as measured by neuroticism was found to have no prediction power. The overall interpretation is that highly emotionally intelligent people tend to take well calculated risks that then drive firm performance and the opposite holds. In as much as individual risk attitude can be said to be unboundedly irrational; the study suggests that emotional intelligence can regulate the extent of the irrationality, thereby optimising individual decision-making.

Originality/Value: The study offers three main contributions. It constructed a practice-based framework for corporate governance and firm performance which acknowledges the optimal interaction of emotional intelligence and individual risk attitude as crucial in achieving sustained performance in the wake of corporate governance. Secondly, the study expands on rationality theories by exploring the concept of unbounded

irrationality. Lastly, it highlights the relevant risk attitude domains incidental to business performance, being, business and financial.

Key terms

Unbounded Irrationality; Decision-making; Corporate governance; Risk attitude; Firm performance; Cognitive biases; Emotional intelligence; Neuroticism; Personality; exploratory mediation.

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DEDICATION

I dedicate this research to my mom, Mai Katsande. Keep flying with the angels. Until we meet again.

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LIST OF ACRONYMS

ACCA	Association of Certified Chartered Accountants
ANT	Actor Network Theory
CEO	Chief Executive Officer
CVM	Common Method Variance
EO	Empirical Objective
EQ	Empirical Research Question
IAS	International Accounting Standard(s)
JSE	Johannesburg Stock Exchange
KING (IV)	Report on Corporate Governance for South Africa (2016)
OECD	Organisation for Economic Co-operation and Development
TO	Theoretical Objective
TQ	Theoretical Research Question
SADC	Southern Africa Development Community
UNISA	University of South Africa
ZimCode	Zimbabwe National Code on Corporate Governance

1 CHAPTER 1: ORIENTATION OF THE STUDY

All models are wrong, as they tend to abstract reality due to the complexities of systems of reality.

Professor George Box, 1976

1.1 INTRODUCTION

This chapter sets the research foundation for this particular study commencing with Professor Box's famous quote that all models fall short of reflecting reality due to complexities of systems of realism (Box, 1976). The chapter is divided into 12 sections. The chapter commences by giving a brief background of the study, highlighting the importance of corporate governance in relation to sustained firm performance. Agency and choice as they pertain to decision making are discussed so as to shed light on the opportunistic behaviour of humans in all matters. Current theorising on the corporate governance–firm performance relationship is analysed with the aim of explaining the gap in literature that this study seeks to explore. A brief description of the proposed methodology is given at the end of the chapter.

1.2 BACKGROUND AND MOTIVATION FOR THE STUDY

The background of and motivation for the study are discussed below.

1.2.1 Twenty-first century collapse of corporates

Friday March 17, 2023, marked the legitimate collapse of Silicon Valley Bank (SVB) through a bank run on the 16th of March 2023 that saw USD$42 billion being withdrawn by depositors within 24 hours. The SVB failure was soon followed by Signature Bank, making official the United States 2023 banking crisis. These failures have been attributed to mismanagement of assets and liabilities emanating from excessive risk taking where the banks invested predominantly in debt securities during periods of low interest rates (Vo & Le, 2023; Geman, 2023).

Closer to this particular research setting, Steinhoff International Holdings, once recognised among the top ten companies on the Johannesburg Stock Exchange (JSE), has been called South Africa's biggest corporate scandal after causing a €10 billion collapse in the company's share price (Rossouw & Styan, 2019). The VBS Bank failure and the Zondo Commission of State Capture in South Africa are also examples of poor corporate governance and public administration (Lekubu & Sibanda, 2021). Other accounting and transparency corporate threats investigated by forensic auditors include the National Security Services Authority (NSSA) in Zimbabwe (Nyakumwa, Wadesango & Sitsha, 2023).

The above chronicle of failures is despite the lessons learned from the numerous corporate collapses of the early 2000s. These collapses, again, were attributed to ineffective risk management practices emanating from poor corporate governance where boards failed to appreciate and understand excessive risk taking by their organisations (OECD, 2014; Hutchinson, Seamer & Chapple, 2015; Shoaib, 2017; Rossouw & Styan, 2019). The global business arena was marred with corporate failures that included Enron, WorldCom, Regal Treasury Bank and Parmalat (Naidoo, 2009; Aebi, Sabato & Schmid, 2012).

Table 1.1 below summarises some of Southern Africa's recent top scandals that have contributed to the need for this research.

TABLE 1.1: Summary of corporate governance failures for a selection of organisations in Zimbabwe and South Africa

Company	Source	Description of Issue
VBS Mutual Bank	Odwa (2018)	• VBS Mutual Bank was placed under curatorship following rampant stealing by executives which caused a liquidity crunch. The bank was then liquidated following an application by the South African Reserve Bank Prudential Authority. About R2 billion was stolen.
KPMG	Shoaib (2017)	• It was alleged that the auditing firm was assisting companies owned by the Gupta family to evade tax. Since the allegations, KPMG has lost R1 billion in revenue and also high-profile customers such as Gold Fields and ABSA.
Steinhoff	Rossouw and Styan (2019)	• Chief Executive Officer (CEO) Markus Jooste resigned after accounting irregularities at the company exposed

Company	Source	Description of Issue
		rampant corruption by senior executives. The share price collapsed by €10 billion.
NSSA – Zimbabwe	NSSA forensic audit report (BDO, 2019)	• A forensic investigation ordered by the Auditor-General unearthed significant financial prejudice suffered by the organisation due to corruption by senior executives and the parent minister (government minister under which the enterprise falls). This led to the arrest of the Minister.
Tongaat Hulett South Africa	de Villiers (2019)	• There were accounting irregularities in the company. The company warned the public that their assets could be inflated by R4.5 billion. Tongaat share price plummeted to the regions of negative 80% on the JSE leading to its suspension by the authority in June 2019.

More than 10 years have passed since the infamous 2008 global financial crisis that saw stock markets plummet, investors lose on a significant scale with entire countries going into an economic recession (Hutchinson et al., 2015). Risk governance flaws rather than technical estimation errors have been held responsible for the specific causes of the financial crisis (Lundqvist, 2015). Around the world, corporate failures led to most jurisdictions introducing codes of corporate governance that included the SOX of United States of America, King Report of South Africa and ZimCode of Zimbabwe.

Corporate governance has been seen to provide the conducive structures through which corporate goals can be achieved. It regulates power and influence in organisations and has been taken to be the main foundation of business growth and shareholder value, ensuring risk taking by corporates is within organisational risk appetites (King IV, 2016; OECD, 2014; Naidoo, 2009). However, even with these enactments, corporate scandals and failures that negatively impact economic prosperity, from market to individual levels, continue to plague the business world (Van Rensburg, Venter & Kriek, 2013).

The Corruption Perceptions Index of 2022 ranked 180 countries and territories according to their public sector corruption on a scale of 0 to 100 with 0 being the most corrupt, indicating the overall corruption in that country. According to the Corruption Perceptions Index, more than two-thirds of countries scored below 50 with the average score being 43 (Transparency International, 2022). Drawing the analysis closer to this particular geographical research setting, South Africa was ranked position 73 out of 180 with a score of 43 and Zimbabwe 160 out of 180 with a score of 22; Botswana did much better at position 34 out of 180 with a score of 61. These results are supported by the 2018 Corporate Governance Index report by the Institute of Internal Auditors South Africa (IIASA, 2018) which revealed that companies were still struggling with engendering good corporate governance. According to this report, which covered South Africa's industrial and service sectors, some sectors viewed ethics as an unimportant part of organisational culture, for example, the provincial government sector scored as low as 30%.

Existing literature that attempted to address these corporate failures explored the relationship between corporate governance and financial performance, reporting varying results (Buallay, Hamdan & Zureigat, 2017; Fadun, 2017; Singh et al., 2017; Rashid, 2018; Ahmed & Hamdan, 2015; Zabri, Ahmad & Wah, 2016; Shamsudin, Abdullah & Osman, 2015; Azeez, 2015).

The existing research however has failed to comprehensively explain the phenomenon as it fell short of recognising the qualitative aspects of the self that can possibly impact the relationship. The literature has instead considered simple causality between corporate governance and firm performance. Results from these studies seem inadequate and elusive as the research designs suffer from parsimony and external validity weaknesses, lacking the inclusion of other qualifying variables to capture the true nature of the relationship (Namazi & Namazi, 2016).

1.2.2 Agency and choice – the opportunistic behaviour of humans

Most studies on corporate governance are grounded in agency theory. Hussain and Rigoni (2018) state that agency theory endeavours to explain the conflict of interest between shareholders as the principals and managers as the agents given the presence of information asymmetry. It recognises the opportunistic behaviour of agents, that is, managers operationalising decisions made by the Board of Directors, making it imperative for these agents to be closely monitored to ensure alignment with principal-agent goals (Glinkowska, 2015; Hussain & Rigoni, 2018).

Many scholars have studied the relationship between management greed and firm performance, also called in other studies shareholder wealth (Haynes, Hitt & Campbell, 2015; Seuntjens, Zeelenberg, Breugelmans & Van de Ven, 2015; Dobre & Răsăuţeanu, 2017; Varma & Khan, 2016). Haynes et al. (2015) argue that leadership has a dark side in that self-interest and opportunism impact shareholder wealth. Seuntjens et al. (2015) further assert that materialism, greed and envy may cause self-interested behaviour in individuals, leading to a desire to acquire more. Individuals are never satisfied. Uncontrolled self-interest can culminate in a long-lasting economic slowdown at both a micro and macro level (Seuntjens et al., 2015).

Humans experience pressure to act in certain ways. This pressure can be either financial or non-financial. Short-term focus on profitability increases the willingness of executives to engage in behaviours that are not ethical (IIA, 2018). It is these pressures that play a vital role in the motives (de Klerk, 2017) that then influence excessive risk taking by individuals in the hope of getting more. Dellaportas (2013) maintains that such conflicting pressures to act ultra vires to the mandate given by the shareholders beyond one's conferred legal powers, originates from being in a position of power, authority and trust.

Corporate governance plays a decisive role in addressing the agency problem. The appointment of a board of directors is in line with the provisions of agency theory. The board acts as a "watchdog" in discharging its fiduciary duty of aligning management interests with those of the shareholders, thereby controlling the problems emanating from this principal-agent relationship (Aktan et al., 2018). The implementation of good corporate governance practices goes a long way in providing balance of power. It neutralises the power of individuals charged with managing organisations.

1.2.3 Fragmentation in corporate governance–firm performance literature

The agency problem and its effects on firm performance have been the subject of debate for many years and have attracted many scholars. However, most studies have mixed research findings on the influence of corporate governance on firm performance.

A number of studies have found a positive correlation between corporate governance and firm performance, with the former viewed as a risk management tool for promoting firm performance (Solomon, 2017; Moudud-Ul-Huq, Zheng & Gupta, 2018; Bussin, Wöcke & Deysel, 2023). Some scholars investigating the relationship have noted either no or a weak relationship between the two variables. Indicating a lack of consensus on the relationship being studied herein, Akbar, Poletti-Hughes and El-Faitouri (2016), after having controlled for possible endogeneity, found no significant correlation between corporate governance and firm performance.

Some studies conducted on corporate governance and firm performance produced inconclusive results or mixed research findings (Rashid, 2018; Zabri, Ahmad & Wah, 2016; Arora & Sharma, 2016). The studies mentioned above found positive correlations with some corporate governance practices while other practices in the same studies had negative correlations with firm performance.

In this particular research setting, most of scholars reviewed found a positive relationship with performance measured by accounting performance measures (Mangena, Tauringana & Chamisa, 2012; Erasmus, Viviers & Mans-Kemp, 2017; Nyakurukwa & Seetharam, 2022; Bussin, Wöcke & Deysel, 2023). The scholars considered corporate governance as measure by board size, ownership concentration, CEO compensation and board independence. However, a number of studies have reported negative relationships between corporate governance and firm performance as measured with performance being measured by market-based measures (Erasmus, Viviers & Mans-Kemp, 2017, Kok, 2020; Nyakurukwa, 2022). Erasmus, Viviers and Mans-Kemp (2017) posit that the negative relationship as measured by market based ratios is attributable to investor scepticism due to increased costs of compliance and window dressing by companies.

The fragmentation in the literature testifies to the fact that current theorising has been simplistic in representing the relationship between corporate governance and firm performance. Current studies have omitted the possible impact of individual motivation and other biases that then form risk attitudes to decision-making, influencing the relationship between corporate governance and firm performance (Arora & Sharma, 2016; Singh et al., 2017). Extant prior studies did not factor in the possible effect of human nature in decision-making but rather focused on the absolute causality between the two. Most business models when looking at causal relationships mainly analyse direct relations between dependent and independent variables.

Professor Box, the great British statistician of the 20th century, was famous for having said in 1976 that all world models were wrong, as they tended to abstract reality due to the complexities of systems of reality (Remington, 2017). The models lack inclusion of qualifying variables that are not easily observable, particularly involving attitudes, to capture the true nature of the phenomenon and hence generalise the findings. Arora and Sharma (2016) argue that there might be a need for augmentation of these intangible aspects with the usual corporate governance practices to achieve sustainable firm performance. Akbar et al. (2016) support this notion, indicating that more insight could be gained by the possible inclusion of aspects that are difficult to measure in the analysis of the relationship between corporate governance and firm performance.

Considering the line of investigation trending in the brief literature review above, this study set out to make five key contributions to the existing body of knowledge:

- Firstly, the status of the relationship between corporate governance and firm performance as given in literature was investigated and determined.
- Secondly, how human rationality influences individual risk attitudes in management decision-making under uncertainty as given in literature was explored.
- Thirdly, the relationship between corporate governance and firm performance was re-examined in light of the unbounded irrationality view, motivation theories and actor-network theory as the theoretical underpinnings of the study.
- Fourthly, the acquired theoretical understanding was used in the construction of a preliminary conceptual framework for the corporate governance and firm performance relationship with individual risk attitude as a mediator.
- Lastly, the final conceptual framework was developed incorporating the findings from an exploratory sequential mixed method design enquiry.

Besides offering a deeper understanding of the phenomenon, this research has policy and practical implications. The research may provide policy makers and regulators with corporate governance insights that have the potential of improving economic performance at both corporate and national level. It is expected that managers through a better understanding of their own rationality or lack thereof as it pertains to decision-making will be equipped with improved self-regulation when contemplating taking excessive risks. At a national level, the research is expected to change the face of national governance through instituting new corporate governance policies that take cognisance of the effects of the psychological elements of humans.

1.2.4 The research gap – recognising the psychology of the human self in the corporate governance–firm performance relationship

The research gap identified spans over theoretical, practical-knowledge, contextual and classic gaps. Van Rensburg et al. (2013) claim that even with institutionalised advancement in corporate governance practices, agency problems persist, eroding corporate value. Literature has shown that current theorising has failed to capture the holistic relationship between corporate governance and firm performance.

Below is the elaboration of the gap in literature identified for this study:

a) *Contextual gap*
    - Not many corporate governance–firm performance studies have been done in Africa, particularly in the SADC region.

b) *Practical-knowledge gap*
    - Literature is fragmented insofar as the relationship between corporate governance and firm performance is concerned (Duong et al., 2019; Bhagat & Bolton, 2019; Buallay et al., 2017; Singh et al., 2017; Rashid, 2018).
    - Even with institutionalised advancement in corporate governance practices, agency problems persist, eroding corporate value (Van Rensburg et al., 2013).

c) *Theoretical gap*
    - Prior studies model the relationship between corporate governance and firm performance as too simplistic in that they assume a direct causal relationship between the two variables. Most studies disregard the effects of other possible intervening variables such as the psychology of the human self in the formation of risk attitudes. De Andreis (2020) points out that solving a problem cannot be a linear or a sequential process; it is a cognitive process riddled with complexity.

- The hard to measure relevant aspects of corporate governance, such as the ethical, psychological and self-governance aspects of humans, are not explained by agency theory and its prescriptions (Deloitte, 2016). Corporate governance mechanisms tend to focus on monitoring and sanctioning, which are the ***hard*** prescriptions of corporate governance. Much less credence, or even no credence, is given to the possible softer prescriptions, which are also incorporated in the general definition of corporate governance.
- Current corporate governance reforms as informed by agency theory, model rational individuals who are interested in furthering their own interests while maximising their usefulness to their principals (Glinkowska, 2015). Agency theory, in that way, exhibits narrowness in its behavioural assumptions.

d) *Classic gap* (new perspective and or phenomenology)

- Researchers agree that there are psychological links between different motivation theories and individual irrationality which impact decision-making in organisations (Tversky and Kahneman, 1981; 1986; Davidson, 1982; Gardner, 1993; Stein, 2003). Modern-day scholars have suggested augmenting existing governance practices with qualitative aspects (Arora & Sharma, 2016; Singh et al., 2017). New theories and or concepts to explain this link are thus required.

This study therefore argues that individuals are not always rational, translating to most behaviours and actions being irrational due to cognitive biases emanating from the various forms of motivation and self-interest. Unbounded irrationality supposes that people are guided by the interaction of self-interest and cognitive biases when making decisions under conditions of risk and uncertainty and thus act fundamentally irrationally. Individual risk attitudes as formed by cognitive biases can explain the irrational behaviour of man in decision-making and as such are critical in understanding the phenomenon under study.

1.3 AIM OF THE STUDY

The aim of this study was to explore the nature of the relationship between corporate governance and firm performance. The study sought to understand this relationship in relation to individual rationality in decision-making. This formed the basis for a new causal framework encompassing the psychological element of individual risk attitudes in the relationship. The enquiry created an in-depth understanding of the phenomenon, focusing on motivations and drivers of human behaviour in relation to decisions and choices under risk and uncertainty. The findings of this study add to the existing behavioural theories and body of knowledge and extend on the theory of decision-making.

The research has policy and practical implications for policy makers, regulatory bodies, boards and managers. It may help governance and regulatory policy makers improve current corporate governance practices and thus protect shareholder value. It is expected that managers through a better understanding of some of the decision-making psychodynamics will become more empowered to influence their own thinking and behaviour. This will curb excessive risk-taking and ensure alignment with shareholder expectations and value.

1.4 PROBLEM STATEMENT

The problem statement for this study was formulated as follows:

Even with the institutionalisation of corporate governance, companies continue to collapse due to poor risk governance. Protecting shareholder value entails an in-depth understanding of the relationship between corporate governance and firm performance. The possible influence of cognitive biases and their impact on human rationality in decision-making is often ignored. Individual risk attitudes as informed by these cognitive biases can explain the irrational behaviour of man in decision-making and as such are critical to the holistic understanding of the relationship between corporate governance and firm performance. A framework which integrates individual risk attitudes as a mediator in the corporate governance and firm performance relationship has thus become imperative to protect shareholder value.

1.5 RESEARCH OBJECTIVES

Outlined below are the research objectives of this study split into theoretical and empirical objectives.

1.5.1 Theoretical objectives

Theoretically the study set out to:

TO 1: Analyse the relationship between corporate governance and firm performance as given in literature.

TO 2: Analyse the impact of human rationality on decision-making by individuals as given in literature.

TO 3: Examine the link between theory on human rationality and the formation of individual attitudes as it pertains to decision-making under risk and uncertainty.

TO 4: Develop a preliminary conceptual framework for the corporate governance–firm performance relationship, integrating individual risk attitudes based on existing literature.

1.5.2 Empirical objectives

Empirically, the research set out to:

EO 1: Examine the concept unbounded irrationality, as it pertains to the formation of individual risk attitudes, and its influences on decision-making as understood by subject-matter experts.

EO 2: Evaluate the individual risk attitude domains relevant to managerial employees as deduced from subject matter experts' insights.

EO 3: Develop a conceptual framework for the corporate governance–firm performance relationship based on the results of in-depth interviews with subject matter experts.

EO 4: Identify and analyse the individual risk attitude domains relevant to managerial employees as informed by a quantitative enquiry.

EO 5: Investigate the extent to which the corporate governance–firm performance relationship is mediated by the individual risk attitudes of those charged with managing corporates.

EO 6: Develop the final framework for the corporate governance–firm performance relationship which integrates individual risk attitudes based on the results of a quantitative survey of management employees and validation thereon by Subject matter experts.

1.6 RESEARCH QUESTIONS

The following are the research questions of this study.

1.6.1 Theoretical research questions

Through the exploration of existing literature, the study set out to answer the following theoretical questions:

TQ 1: What is the nature of the relationship between corporate governance and firm performance as given in literature?

TQ 2: What is the impact of human rationality on individual decision-making as given in literature?

TQ 3: How may the psychological concept of human rationality be linked to individual attitudes in decision-making under risk and uncertainty?

TQ 4: How may corporate governance practices best be integrated with individual risk attitudes in decision-making in developing a conceptual framework for the corporate governance–firm performance relationship as informed by literature?

1.6.2 Empirical research questions

Through an empirical investigation, the study set out to answer the following research questions:

EQ 1: How is unbounded irrationality, as it pertains to the formation of individual risk attitudes in decision-making, understood and best described by subject matter experts?

EQ 2: What are the individual risk attitude domains relevant to managerial employees as deduced from subject matter experts' insights?

EQ 3: How may a framework for the corporate governance–firm performance relationship best be conceptualised according to subject matter experts?

EQ 4: What are the individual risk attitude domains relevant to managerial employees as informed by a quantitative enquiry?

EQ 5: To what extent is the corporate governance-firm performance relationship mediated by the individual risk attitudes of those charged with managing corporates?

EQ 6: How may a framework for the corporate governance–firm performance relationship which integrates individual risk attitudes best be described?

1.7 ABBREVIATED LITERATURE REVIEW

The aim of this section is to set a foundation for the theoretical objectives of the study from which a proposed conceptual framework will be developed. The section also covers clarification of concepts and offers a brief review of prior studies on the relationships of the variables under study. The section explores human rationality in decision-making and ultimately discusses the gap in literature identified.

1.7.1 Clarification of concepts

In this section, the functional definitions of the variables under study, i.e., corporate governance, firm performance and individual risk attitude, are given as they pertain to this study.

i. Corporate governance

Corporate governance has been defined in different ways by different scholars. However, Lloret (2016) notes that universally, corporate governance has the same elements despite different organisational contexts. Corporate governance has been described as “a set of relationships between a company’s management, its board, its shareholders and other stakeholders” (OECD, 2015: 7). The King IV (2016) report defines corporate governance as exercising ethical and effective leadership by those charged with governance for the achievement of four main aspects, i.e., ethical culture, good performance, effective control and legitimacy.

For the purposes of this study, the definition of corporate governance shall be *a set of rules, principles or structures applied in the effective management of an organisation* *for the achievement of good corporate performance and promotion of ethical leadership, thereby protecting the interests of stakeholders.*

ii. Firm performance

Taouab and Issor (2019) conclude that good firm performance is high and long-term profitability which generates employment opportunities, thereby improving individual income. They explain that such financial profitability is associated with high returns to employees and high-quality products for customers. The definition of firm performance for this study is "*the extent to which an organisation succeeds in realising its corporate objectives as they pertain to its stakeholders*"(Antony & Bhattacharyya, 2010).

iii. Individual risk attitude

To define individual risk attitude, also referred to as "risk attitudes" in the study, the study examined definitions of attitude in psychology literature and defined risk separately; the combination culminated in a functional definition for this study. A synthesis of various definitions as explained in Chapter 4 revealed a number of key aspects of attitude – those of tendency, being resident in the inner part of the mind and constituting object-evaluation associations. Mishra and Lalumière (2017) define risk as an "outcome variance". For this study, individual risk attitude *is a mental disposition towards risk which can be said to be responsive to human and/or environmental stimuli in which a decision is being made.*

The following section details the inroads that have been made in studying the relationship between corporate governance and firm performance. The theory of decision-making in relation to human rationality is explored next, based on existing literature.

1.7.2 The importance of corporate governance in firm performance

Organisations globally are continually vying for new sources of sustainable competitive advantage (Hahn & Radulescu, 2018). Corporate governance has become topical even in ensuring investor confidence, among other researched benefits. Many scholars have highlighted the contribution of corporate governance to the creation of sustained firm performance.

Lloret (2016) postulates that corporate governance guidelines enhance internal capabilities for the management of long-term corporate sustainability. The Organisation for Economic Co-operation and Development (OECD, 2015) argues that corporate governance principles contribute to the achievement of broader economic goals in respect of investor confidence, capital formation and allocation.

Corporate governance plays a crucial role in addressing the agency problem. Haynes et al. (2015) maintain that leadership has a dark side which manifests as self-interest and opportunism, impacting shareholder value. Seuntjens et al. (2015) further assert that materialism, greed and envy may cause self-interested behaviour in individuals, leading to a desire to acquire more. Corporate governance is hailed as a form of control of man’s self-interest. Dellaportas (2013) postulates that conflicting pressures to act ultra vires to the mandate given by the shareholders originates from being in a position of power, authority and trust. Literature emphasises the key role of the board of directors as an internal monitoring mechanism of the behaviour of executive management on behalf of the shareholders; its advisory and counselling roles are also important (Singh et al., 2017). The appointment of a board of directors is in line with the provisions of agency theory in that the board acts as a “watchdog” in discharging the fiduciary duty of aligning management interests with those of the shareholders, thereby controlling the problems emanating from this principal–agent relationship (Aktan et al., 2018).

Corporate governance is expected to increase firm efficiency, effectiveness and productivity, thereby improving the overall firm performance. Implementation of good corporate governance practices serves to balance the power of individuals charged with managing or governing organisations, thereby ensuring economic prosperity for these organisations. Haynes et al. (2015) confirm that the effect of management self-interest is moderated by corporate governance practices. The authors specifically mention chief executive officer (CEO) tenure, powerful board presence, board independence and managerial discretion.

When corporate governance principles are religiously implemented and observed, corporate scandals, fraud and civil and criminal liability of companies may be drastically reduced (Aktan et al., 2018). The authors further assert that in the absence of proper corporate governance, undesirables such as poor service delivery, defective products and management self-interest due to complacency and corruption become prevalent.

1.7.3 Theoretical foundation of the study

This research study adopted the stance that no single theory could holistically capture the relationships between the variables being studied. It explored human rationality theories and motivation theories to establish a firm theoretical foundation from which to commence building the conceptual framework for the mediation of individual risk attitude in the corporate governance–firm performance relationship.

Mintzberg's decision-making process postulates that, first, there is identification of the problem, then there is collection of information, evaluation of alternatives and finally selection of the preferred solution. The theory of decision-making is not complete without studying human rationality and its influence on decision-making. The major proponents of the rational choice theory (RCT), such as Adam Smith, claim that all decision-making is based on utility maximisation of economic self-interest and is rational (Zey, 1998). Herbert A. Simon, however, argues that human behaviour is intentionally rational but in a bounded way, due to inherent cognitive limitations such as time constraints, intellect and information asymmetry (Simon, 1947). He further explains that all humans seek to satisfice, i.e., find a good enough choice, and therefore can never achieve utility maximisation.

On the other hand, scholars like Tversky and Kahneman (1981;1986), Davidson (1982) and Vazsonyi (1974) recognise the effect of various cognitive biases, such as heuristics, affect, emotions, social and situational factors, on human rationality and thus decision-making. They claim that these form the basis of irrational behaviour. The scholars caution that people should recognise their own irrationality so as to solve the inconsistencies of decision-making. With unbounded irrationality, which this study regards as responsible for decision-making, all forms of self-interest – not just financial – and desires become default preferences and hence there are no limits to what one can do to satisfy them.

The study reviewed selected human motivation psychology-based theories, i.e., those of Thomas Hobbes, Sigmund Freud and Abraham Maslow. These theories as they pertain to this study can be interpreted to view people as complex systems beyond rational thinking, as rationality can be inherently irrational. De Klerk (2017) explains that even rational acts can be triggered by irrational agendas or motivations. Cognitive biases and hence human irrationality born of self-interest and self-preservation are therefore the basis for the formation of individual attitudes under risk and uncertainty.

The domains of individual risk attitudes can be seen through the world view of actor networks that are continuously inter-acting and transforming. Actor network theory (ANT) engages concepts such as translation and symmetry of actors, i.e., of risk attitude domains, in the formulation of behaviour.

Table 1.2 sets out the relevant aspects of the selected underlying theories in relation to the current study.

TABLE 1.2: Summary of theories underpinning the study

Name of theory	**Description of theory**	**Key concepts**	**Relevance of theory to the current study**	**Theorist/ Scholars**
Theoretical basis				
Unbounded irrationality	Humans are inherently irrational, unboundedly, as their choices are affected by cognitive biases and judgement errors which are not consistent with rational decision-making. Decision-making by agents is inconsistent with the desires of shareholders. It is unboundedly dependent on all forms of self-interest and preservation in all choices made under risk and uncertainty.	Humans are guided by irrational thinking in decision-making.	The following aspects of unbounded irrationality were synthesised from various theories of human rationality (RCT, bounded rationality, irrationality) and seen to be relevant to this study: i. Automatic cognitive capacities of the subject that decides. ii. No regard for knowledge availability of alternatives. iii. Deep-seated self-interests become default preferences. iv. No regard for availability of resources in the decision-making process. v. Actions are attitudinal as opposed to reflective.	Tversky and Kahneman (1981; 1986) Kahneman and Tversky (1974) Davidson (1982) Dawes (1988) Korsov and Thissen (2000)
The actor-network theory (ANT)	The actor-network concepts posit that for one actor to act, many others should act in congruency. An action is therefore shared; thus, the actor-network theory is not a theory of actors in a network but rather a	The collective character of an action.	The following key aspects of Actor Network Theory (ANT) were considered: i. The process of translation: the associations of the actors in the risk attitude network are	Latour (1996; 2005; 2006)

Name of theory	Description of theory	Key concepts	Relevance of theory to the current study	Theorist/ Scholars
	theory of actors as a network. The actor network explains the plethora of heterogeneous elements. Actor-network theory therefore acknowledges the collective character of an action.		not predetermined or rational but rather subject to translation. ii. The ANT concept of symmetry: power is distributed evenly amongst the actors such that no one actor is more important than the other.	
Supporting theories				
Motivation theories: 1. *Hobbes* 2. *Freud* 3. *Maslow*	These theories explain the drivers or motivation of human behaviour in making decisions.	The power of self-interest and desires in decision-making.	The following aspects of the theories were seen to be relevant to this study: Hobbes: Humans are inherently selfish, mean and violent. Freud: There is constant internal conflict in the mind – people are made up of sub-personalities. The deep-seated unconscious drives determine human behaviour. Maslow: Humans are driven by needs that are hierarchical in importance and the lower-level basic needs are satisfied first.	Thomas Hobbes ([1651] 1968) Sigmund Freud (1910) Abraham Maslow (1943)

For an objective investigation of the relationship between corporate governance and firm performance, insights from multiple theories were employed in the analysis.

1.8 ABBREVIATED RESEARCH METHODOLOGY

According to Crotty (1998: 3), methodology “is the strategy or plan of action which lies behind the choice and use of particular methods”. The research methodology framework combined the philosophical assumptions, strategies and methods of inquiry to come up with the research approach. Figure 2 below is a schematic representation of the research methodology that was followed in this study.

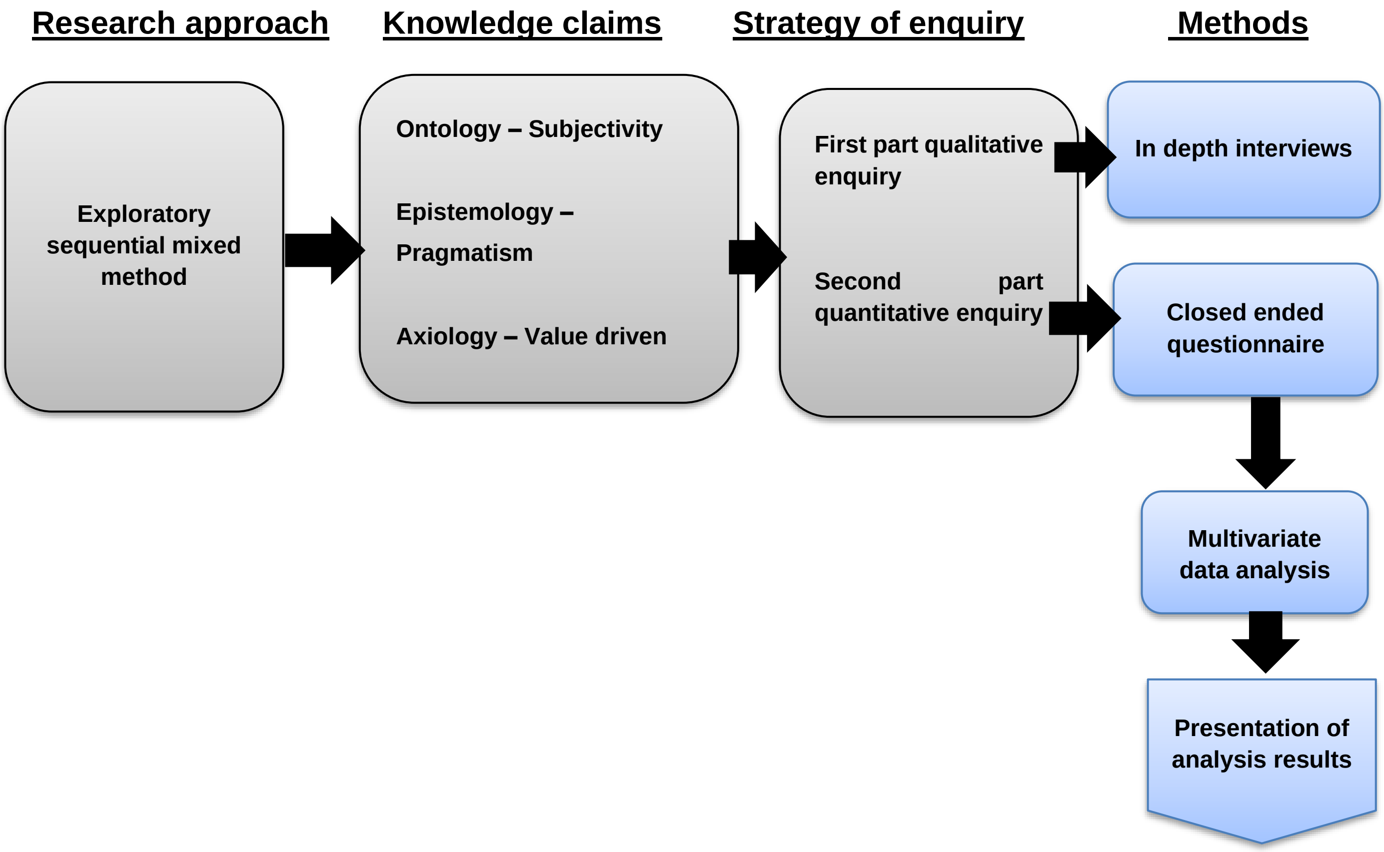

FIGURE 1.1: Research approach framework

Source: Compiled with information from Creswell (2014)

Below is a brief discussion of the philosophical underpinning of the study.

1.8.1 Philosophical assumptions of the study

Early psychologists, Freud, Maslow and Hobbes included, believed that metapsychology was derived to a large extent from the personal, subjective worlds of the bearers. Subjectivism views man as an agent in the world whose actions are born of belief. Hobbes believed that humans were naturally selfish and hence centred on selfish desires. The same supposition of subjectivity was the foundation of Maslow's theory of motivation. Freud's theory was underpinned by the concept of "desire" which he claimed unconsciously drove man to behave in certain ways. The ontological assumptions for this study were therefore based on "subjectivity" claims. Subjectivity has to do with individual perception or experience and is confined within one's own worldview (Encyclopaedia of psychology and religion, 2014).

The pragmatic approach has an epistemological presupposition that there is no objective course and therefore no one reality (Buchanan, Henig & Henig, 2008) and therefore resonates well with the ontology chosen for this study. Epistemology pertains to how one knows about what one knows (Creswell, 2014). The epistemological stance taken in this study is therefore based on the knowledge claim position of “pragmatism”. Pragmatists draw conclusions from multiple enquiries. This philosophical stance therefore provides a theoretical lens that ensures greater understanding of reality and real-world practice.

The value system assumptions form part of the last component of the philosophical stance, the axiological assumptions. It classifies whether the reality can be said to be value free, also called value neutral or value driven (Pathirage, Amaratunga & Haigh, 2008). Pure pragmatists as described by Dewey, one of the early pragmatists, are “value driven”, as they incorporate value in their quest for knowledge (Mertens, 2010).

This study solicited different world views from a wide population using multiple enquiry methods while incorporating strong ethical principles in the process, to gain as much knowledge about the phenomenon under study as possible. It should however be noted that “no scientific explanation of human behaviour is ever complete” (Berliner, 2002: 20).

1.8.2 Strategy of data enquiry

The study adopted an exploratory sequential mixed method design which is an approach in which a researcher first employs qualitative enquiry in pursuit of exploring the views of participants or, in this case, subject matter experts, before embarking on quantitative data enquiry. The enquiry with subject matter experts in turn informed the adaptation of existing instruments to be employed in the second part data. The first part and second part of data enquiry complemented each other and thus neutralised the limitations of a purely single enquiry method.

The aim of this research approach was to deduce ideas or facts from existing literature and corroborate those with mixed methods of enquiry, with the intention of developing a more lucid framework to best answer the research problem.

First part enquiry – In-depth interviews with subject matter experts

The first part of the enquiry comprised semi-structured in-depth interviews with subject matter experts, i.e., industrial psychologists, so as to gain insight into the main psychological elements pertaining to the study. This particular method was chosen for the study as better measurement instruments with good psychometric properties could then be developed based on the initial exploration of qualitative data.

Second part enquiry – Primary data collection through a survey

The second part of the enquiry was quantitative in nature through the administration of closed-ended questionnaire informed by the first part enquiry, i.e., interviews with subject matter experts. This was required to objectively develop a framework with a properly quantified bias.

1.8.3 Data collection

This section defines the parameters for data collection. It specifies the unit of analysis, target population, sample size, and the instruments that were used in the collection of the data.

1.8.3.1 *Unit of analysis*

This section details the unit of analysis for each part of enquiry in this study.

First part enquiry – In-depth interviews with subject matter experts

The sample unit was “individual subject matter expert”.

Second part enquiry – Primary data collection through a survey

The sample unit was “management employee”.

1.8.3.2 *Target population*

The ensuing was the target population for each part of data enquiry.

First part enquiry – In-depth interviews with subject matter experts

The target population for the first part – in-depth interviews – was industrial psychologists whose expert knowledge in psychology together with their organisational experience were applied in the adaptation of an existing instrument/s. The target population were members of an internationally recognised association of psychologists with more than 5 years' experience.

The population was drawn from Southern Africa, Zimbabwe and South Africa, since this was the research setting. Recruitment of participants was through referrals by colleagues in the researcher's business networks.

Second part enquiry – Primary data collection through a survey

The target population for the second part survey enquiry consisted of management employees on all levels from different sectors of the industry. These were targeted as they were charged with decision-making in companies. The study covered all levels of management – from junior to executive – as it endeavoured to be holistic in its approach and include all hierarchies of decision-making in organisations. The population was drawn from the Southern Africa region, represented by Zimbabwe and South Africa. Recruitment of participants was through member and business-oriented online network platforms the researcher subscribes to, such as ACCA member online networks.

The population excluded the boards of directors which are usually viewed as custodians of corporate governance as in this study, the presence of a Board of Directors was considered a corporate governance mechanism. The population also excluded managers with fewer than 3 years' experience as they were viewed as having insufficient information power to enable the analyses required.

1.8.3.3 *Sample size*

The following was the sample size for the sequential data enquiry methods.

First part enquiry – In-depth interviews with subject matter experts

The sample size for qualitative studies is guided by the concept of saturation (Mason, 2010). This means that "the more information the sample holds, relevant for the actual study, the lower the number of participants is needed" (Mason, 2010: 1), which was the case for this study as subject matter experts with the requisite knowledge and experience were purposely selected with no new themes emerging after the 7th interview.

Second part enquiry – Primary data collection through a survey

Hayes (2012), the inventor of PROCESS Macro, in his illustration of using mediation and moderation studies employed data from 129 participants. This implies that the seemingly conservative sample of 129 was statistically analysable in PROCESS, the software used in this study. Sample sizes of 155 were used for mediation analysis by Abu-Bader and Jones (2021) and were found to have adequate statistical power.

This study employed a sample size of 161 people.

1.8.3.4 *Sampling method*

The following methods were used for the sequential data enquiry.

First part enquiry – In-depth interviews with subject matter experts

Participants for the in-depth interviews, i.e., the subject matter experts, were selected through a purposive sampling method to ensure that the participants possessed sufficient information power suitable for addressing the research objectives. An interview guide drove the discussion. Consent was solicited before collection of data.

Second part enquiry – Primary data collection through a survey

Respondents for the survey were selected through the random sampling method. Simple random sampling was chosen for the selection of survey respondents to ensure that each element in the population had an equal chance of being chosen (Diamantopoulos & Schlegelmilch, 2000). The questionnaire was administered through an online URL link. Consent was solicited before collection of data.

1.8.4 Data analysis

The following is a brief description of the statistical analysis methodology for each part of the data enquiry.

First part enquiry – In-depth interviews with subject matter experts

Data collected from the qualitative enquiry were thematically analysed manually. Thematic analysis employs procedures for capturing patterns or themes across data sets drawn from a qualitative enquiry (Braun, Clarke, Hayfield & Terry, 2019).

Second part enquiry – Primary data collection through a survey

This study employed descriptive statistical analysis in the initial stages of data analysis of the quantitative survey and thereafter, exploratory factor analysis (EFA) and correlation analysis using SPSS. Mediation was tested through multiple regression analysis using Hayes' PROCESS software. Validation of the resulting framework was done through Amos software and subject matter experts' consultations.

1.9 SIGNIFICANCE OF THE STUDY

The research may provide the following benefits:

- Offer a new practice-based framework for the corporate governance–firm performance relationship, incorporating the psychological element of individual risk attitudes in management decision-making. It is thus envisaged that managers that make decisions on behalf of organisations will be better informed and able to make sound decisions through greater understanding of the effect of their risk attitudes, and hence self-regulate.
- Contribute to new knowledge and therefore expand on the current behavioural theories pertaining to human rationality, individual risk attitudes and decision-making.
- Offer a foundation for future studies as this study will contribute to the understanding of the causal relationship between corporate governance and firm performance inasmuch as human motivations, drivers and other unobservable causes of this phenomenon are concerned.
- Identify policy and practical implications for policy makers, regulatory bodies, boards of corporates and managers. The research study can enlighten policy makers on governance and regulatory issues to improve current corporate governance practices and protect shareholder wealth.

1.10 DELINEATION OF THE STUDY

- The study focused on the commercial sector of the industry, including mining, banking, manufacturing, parastatals and service sectors. The delineation was due to the fact that firm performance was herein perceived as sustained or improved profitability analysed through financial performance measures.

- The regional scope considered was Southern Africa; however, the participants were drawn from South Africa and Zimbabwe. This was due to the need to restrict the research setting to a context familiar to the researcher allowing for a deeper understanding of the specific cultural, social, economic and environmental factors that may influence the phenomenon under study.
- The target population for this study consisted of management employees, junior and senior, as the study endeavoured to be inclusive and holistic, covering all hierarchies of decision-making in organisations. However, some schools of thought contend that most detrimental corporate decisions are made at senior level positions.
- The selection of the mediating variable for this study was anchored on the notion of cognitive biases and hence unbounded irrationality in decision-making. The resultant framework therefore was not reflective of other factors influencing the corporate governance–firm performance relationship outside this enquiry.

1.11 ETHICAL CONSIDERATIONS

The Unisa policy on research ethics was applied in this study. The researcher ensured, as required by the policy, that she was issued with an Ethical Clearance Certificate, Certificate number 2022_SBL_DBL_004_FA from the Research Ethics Review Committee (RERC) before embarking on data collection. The research included human beings. It however anticipated the participation of humans to be in the low-risk category where the only foreseeable risk was one of potential inconvenience or discomfort to the participants. Prior to the collection of data, the researcher ensured that voluntary consent from participants was solicited and that the rights of participants would be protected.

1.12 LAYOUT OF THE RESEARCH REPORT

Table 1.3 presents the chapter outline for the research study.

TABLE 1.3: Layout of the research report

Introduction	
Chapter 1	This chapter of the research report presents the background, problem statement, research objectives, research questions and brief literature review, as well as the research methodology to be used in the study.
Literature review	
Chapter 2	This chapter details the literature reviewed in this study pertaining to the relationship between corporate governance and firm performance. Current theorising on the subject is discussed, leading to the identification of the gap in literature to be studied.
Chapter 3	This chapter reviews literature on the theory of decision-making in relation to agency and choice problems. The proposed underpinning theory from adjacent literature of unbounded irrationality is discussed.
Theoretical conceptual framework	
Chapter 4	The chapter details the construction of the preliminary conceptual framework, taking into account the literature review and underpinning theories as discussed in the previous two chapters.
Research methodology	
Chapter 5	This chapter details the research methodology to be adopted, from the collection of data to the analysis of the data collected. It explains the philosophical stance of the research, the research design, the strategies of enquiry, target population and sampling methods. The chapter concludes by outlining the ethical considerations of the study.
Data analysis – qualitative enquiry	
Chapter 6	Results from the first part qualitative enquiry are collated and analysed for emerging and recurrent themes leading to the selection and adaptation of the measurement instrument for the second part quantitative enquiry.
Data analysis – quantitative enquiry	

Chapter 7	Results from the second part quantitative enquiry are collated and analysed using SPSS and PROCESS statistical software. Data validation and model fit are confirmed through Amos software and subject matter experts.
Conclusions and recommendations	
Chapter 8	This chapter offers conclusions and recommendations drawn from the study enquiries. The conclusions are responses to the research questions formulated in the first chapter. The chapter concludes by giving recommendations for further studies of a similar nature.

1.13 SUMMARY

This chapter gave the background of the study, explaining the motivational antecedents to the study. The problem statement, research objectives and questions were discussed in light of the phenomenon under study. A short literature review to assist in the exploration of the phenomenon under study was given together with the research methodology. The chapter concluded with the layout of the report.

2 CHAPTER 2: CORPORATE GOVERNANCE AND FIRM PERFORMANCE

2.1 INTRODUCTION

The relationship between corporate governance practices and firm performance has attracted growing attention in social sciences research. Questions pertaining to the effectiveness of various corporate governance mechanisms in the achievement of sustained firm performance for the protection of shareholder wealth have been central in these studies. This chapter begins by clarifying the key functional concepts pertinent to this study, namely, corporate governance and firm performance. Corporate governance evolution, reforms in different jurisdictions and corporate governance mechanisms employed in the management of corporates to ensure optimum firm performance are discussed. The chapter explores agency theory as the main school of thought in corporate governance studies in relation to the opportunistic behaviour of man. Growing trends in the literature pertaining to the aforementioned relationship are explored to establish the current state of theorisation and thus attempt to gain a better understanding of this phenomenon.

In this chapter, the first of the seven objectives of the study are addressed so as to build on the literature relevant to the understanding of the phenomenon under study.

The theoretical research question of the study to be addressed in this chapter is:

TQ 1: What is the nature of the relationship between corporate governance and firm performance as given in the literature?

2.2 CLARIFICATION OF KEY CONCEPTS

In this section, the definitions of the concepts under study, i.e., corporate governance, firm performance and individual risk attitude, are discussed as offered by various scholars. A synthesis of literature on these definitions will inform the functional definitions of the concepts as they pertain to this particular study.

2.2.1 Corporate governance

There were more than a thousand articles and books written on corporate governance by 2018 (Moudud-Ul-Huq, Zheng & Gupta, 2018). Different definitions proffered as functional definitions for other studies are analysed in order to suggest a definition suitable for this particular research. The analysis focuses on the key concepts, players and outcomes, from which the functional definition for this study will be established.

Amongst the earliest definitions of corporate governance was the definition proffered by Jensen and Meckling (1976), some of the original proponents of the agency theory. They defined corporate governance as simply a set of principles employed in firms so as to ensure transparency of management to the stakeholders, especially the shareholders. Most scholars see it as a mechanism employed in the effective governing, controlling and management of organisations by management and the board of directors to safeguard the interests of stakeholders, with the main objective of ensuring corporate economic value (Krechovska & Prochazkova, 2014; Gupta & Sharma, 2014; Andreau, Louca & Panayides, 2014; Cadbury Committee Report, 1992; Singh et al., 2017).

Various definitions given for corporate governance are shown in Table 2.1. Key aspects of the various proffered definitions have been extracted and classified into concepts, players and outcomes.

TABLE 2.1: Definitions of corporate governance

Source	Definition	Key aspects
Moudud-Ul-Huq, Zheng and Gupta (2018: 209)	"Corporate Governance is broadly defined by a set of rules that help to ensure the trust, accountability, and confidence of stakeholders and motivate the organization to operate efficiently by generating economic value"	Set of rules **– Hard concepts** Trust and accountability **– Soft concepts** Efficiency **– Outcome** Economic value **– Outcome** Stakeholders **– Players**
Buallay, Hamdan and Zureigat (2017: 79)	"A combination of policies, laws and instructions influencing the way a firm is managed and controlled, it consists of a framework of rules to grant transparency and fairness in the relationship between the firms and its shareholders, the framework of corporate governance consist of both external and internal contracts between employees and the shareholders it includes distribution of rewards and responsibilities and conditions to avoid conflicting interests."	Policies, laws and instructions **– Hard concepts** Manage and control a firm – **Soft concepts** Rules **– Hard concept** Transparency and fairness **– Outcome** Relationships between the employees and the shareholders **– Players** Avoidance of conflict of interest – **Outcome**

Source	Definition	Key aspects
		Distribution of rewards and responsibilities **– Soft concepts**
Singh et al. (2017: 1)	"The mechanism by which a company is controlled and run by its CEO, board of directors and senior management."	Mechanism **– Hard concept** Control and run an organisation **– Soft concepts** CEO, board and senior management – **Players**
Zabri, Ahmad and Wah (2016: 288)	"The process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective."	Process **– Hard concept** Direct and manage the business **– Soft concepts** Business prosperity – **Outcome** Corporate accountability **– Outcome**
The King IV (2016: 11)	"The exercise of ethical and effective leadership by the governing body towards the achievement of the following governance outcomes: ethical culture, good performance, effective control and legitimacy."	Effective leadership **– Soft concept** Ethical culture **– Outcome** Good performance **– Outcome** Effective control **– Outcome** Legitimacy **– Outcome**
Davies (2016: 6)	"Corporate governance is a system for optimising the contribution of a number of disparate parties to a purpose which they are persuaded to share."	System **– Hard concept** Parties **– Players** For a shared purpose **– Outcome**
OECD (2015: 9)	"Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders."	Set of relationships between board, management and the shareholders – **Players**
Gupta and Sharma (2014: 4)	"Corporate governance refers to a code of conduct through which companies are directed and controlled."	Code of conduct **– Hard concept** Control and manage the organisation – **Soft concepts**
United Kingdom Corporate Governance Code (2012: 1)	"Corporate governance is the system by which companies are directed and controlled."	System – **Hard concept** Direct and control organisations – **Soft concept**
Higgs report (2003: 11)	"Corporate governance provides an architecture of accountability – the structures and processes to ensure companies are managed in the interests of their owners."	Accountability – **Soft concept** Structure – **Hard concept** Processes **– Hard concept** Manage **– Soft concept** Interest of owners **– Outcome**
OECD report (1998: 9)	"Corporate governance comprehends that structure of relationships and corresponding responsibilities among a core group consisting of shareholders, board members and managers designed to best foster the competitive performance required to achieve the corporation's primary objective."	Structure **– Hard concept** Relationships **– Soft concept** Responsibilities **– Soft concept** Shareholders, Board members, managers **– Players** Foster competitive performance – **Outcome** Corporate objective – **Outcome**

Source	Definition	Key aspects
Jensen and Meckling (1976)	Set of principles that lead the firm management to be transparent to the shareholders in particular and stakeholders in general.	Principles **– Hard concept** Management employees and shareholders – **Players** Transparency – **Outcome**

From the articles analysed in Table 2.1, the key aspects of corporate governance common amongst the scholars are grouped based on similarity of meaning:

i. Rules/policies, laws and instructions - **hard concepts**.

ii. Process/mechanism/structure/system/principles - **hard or soft concepts** depending on the extent to which they are prescriptive.

iii. Accountability/responsibility – **hard or soft concepts** depending on the terms of reference.

iv. Direct and manage the business/effective control - **soft concepts.**

v. Effective leadership/efficiency - **soft concepts and outcome** of corporate governance.

vi. Transparency and fairness, trust/ethical culture/legitimacy - **soft concepts.**

vii. Economic value/business prosperity/good performance - **outcome of corporate governance.**

viii. Avoidance of conflict of interest/interest of owners/corporate objective - **outcome of corporate governance.**

ix. Relationships between board, management and the shareholders - **players**.

Lloret (2016) notes that, universally, corporate governance has the same elements despite being different depending on organisational context. Most of the scholars reviewed highlighted efficiency (Moudud-Ul-Huq, Zheng & Gupta, 2018), transparency and fairness (Buallay, Hamdan & Zureigat, 2017) and corporate accountability (Zabri, Ahmad & Wah, 2016) as key governance outcomes. King IV, which is the code of good corporate governance in South Africa, extends these to include ethical leadership, legitimacy and effective control.

Research gap: The definitions are hinged on the same *concepts, players* and *outcomes.* Further analysis of these definitions shows that inasmuch as it seems as if they are different, they generally cover both hard and soft concepts. Agency theory posits that to reduce agency problems, or what Jensen and Meckling (1979) call residual loss, there is a need for monitoring and sanctioning mechanisms, discussed herein under section 2.3. These fall within the “hard” mechanisms of corporate governance, and altogether ignore the much softer mechanisms which are also given in the definition of corporate governance synthesised above.

The functional definition for this study hinges on the most mentioned concepts, players and outcomes, but does not ignore the least mentioned aspects. Corporate governance for this study is defined as ***a set of rules, principles or structures applied in the effective management of an organisation for the achievement of good corporate performance and promotion of ethical leadership, thereby protecting shareholder value.***

2.2.2 Firm performance – clarifying the concept

Every organisation’s priority is to sustain its competitive position and achieve superior performance (Songling, Ishtiaq, Anwar & Ahmed, 2018). Firm performance has been studied particularly as dependent variable; however, many of these studies omitted to provide a proper definition and thus assumed the variable to be self-explanatory. Due to its complexity, the definition of firm performance remains a challenge for scholars (Santos & Brito, 2012). Some of the studies that have endeavoured to define and determine measures of firm performance are discussed below.

2.2.2.1 *Definition of firm performance*

To find a functional definition for firm performance, this study examines the concept from the early 1950s to the present day.

Georgopoulos and Tannenbaum (1957) considered firm performance as equivalent to organisational efficiency, translating to how an organisation as a social system achieved its objectives given limited resources.

In the 1960s to 1970s, firm performance was seen as the ability to exploit the surrounding environment, given limited resources (Yuchtman & Seashore, 1967).

In the 1980s, Porter’s (1986) definition was hailed as amongst the most precise, with his mention of value creation for clients. In the 1990s some of the definitions proffered were those of Harrison and Freeman (1999), who described it as satisfying the demands of stakeholders, and Bourguignon (1997), who related performance with an action or a behaviour and not just a result.

In the 2000s, i.e., at the beginning of the twenty-first century, Peterson, Gijsbers and Wilks (2003) associated firm performance with capability and ability to efficiently exploit limited resources available for the achievement of the company's set objectives. Verboncu and Zalman (2005) added the dimension of competitiveness, efficiency and effectiveness. Close to this definition was Colase (2009), who associated firm performance with several concepts that included growth, profitability, return, productivity, efficiency and competitiveness.

In more recent times, Taouab and Issor (2019), in their study "Firm performance: definition and measurement models", concluded that good firm performance constituted high and long-term profitability which generated employment opportunities, thereby improving individual income. They explained that such financial profitability was associated with high returns to employees and high-quality products for customers. This description of performance is in agreement with some concepts in the earlier definition by Bartoli and Blatrix (2015) who advocated the inclusion of concepts such as evaluation, efficiency, effectiveness and quality.

The definition for firm performance that resonates most with this study due to its relation to stakeholders' wealth is: ***"it is the extent to which an organisation succeeds in realising its corporate objectives as they pertain to its stakeholders"*** (Antony & Bhattacharyya, 2010).

2.2.2.2 *Measurement of firm performance*

Although many studies employ single indicators, there is consensus on the application of multi dimensions for firm performance measurement. Santos and Brito (2012) highlight growth, profitability, market value, key stakeholder satisfaction and social and environmental aspects as indicating the multi-dimensionality of firm performance. Lebans and Euske (2006) concur, dividing the measures into financial and non-financial measures of performance.

Table 2.2 lists financial and non-financial measures as given by Santos and Brito (2012).

TABLE 2.2: Measures of firm performance

Financial measures	Non-financial/strategic measures
Growth	Customer satisfaction
Profitability	Employee satisfaction
Market value	Social performance
	Environmental performance

Compiled with information from Santos and Brito (2012)

Richard et al. (2009) indicate that researchers should choose the dimensions of firm performance that are most relevant to their particular study. Growth and profitability are core to the existence of economic organisations where shareholders expect a return, hence the establishment of corporate governance tenets to ensure such. This is indisputable, rendering related financial measures imperative for this particular study.

Studies have mostly adopted either of the two main enquiry methods on firm performance, published data or management perception. Management perception, as reported by Spanos and Lioukas (2001), has been extensively employed in strategy related studies, like those of Dess and Robinson (1984) and Robinson and Pearce (1988). With perception-based measures, performance is based on how it is being perceived, in this case by managers in an organisation.

2.2.3 Corporate governance and agency theory

Most of the studies on corporate governance are grounded in agency theory. Agency theory explains "the conflicting relationship between managers and stakeholders assuming the presence of information asymmetry, opportunistic behavior of agents and conflicts of interests between principal (shareholder) and agent (manager)" (Hussain, Rigoni & Orij, 2018: 413).

Agency theory emerged in the late 1960s and early 1970s as "a theory which included the analysis of the market as well as the study of the economics and administration of the firm" (Ahmed, 2019: 641). It was called the economic theory of agency. The emergence of corporations and increased organisational size and complexities brought about the separation of ownership and administration of these organisations and hence agency relations in business. The emergence of agency theory is often credited to Jensen and Meckling (1976); however, the first proponents of the theory of agency were two Americans, Barl and Means, in 1932. The scholars discovered that there was "separation between the ownership of the company's capital and the process of control and supervision within the companies and that this has implications on the level of performance of the company" (Ahmed, 2019: 641).

Agency theory is central in the analysis of conflicts of interest between shareholders, principals and those charged with governance and/or management on their behalf, called the agents. Agency theory attempts to explain the nature of conflict between managers who control organisations using their knowledge and expertise and shareholders who are the primary providers of the required funds for these organisations (Fadun, 2017).

The primary objectives of agency theory as reiterated by Tamimi (2008: 30) are to:
"1) clarify how incentives and interests among contracting parties can be aligned so as to reduce the costs associated with this relationship.
2) ensure maximisation of shareholder wealth by the agents
3) assist in the addressing of issues between the owners and the agents i.e., if there is lack of integration and consistency of information".

The need to align the interests of both the owners and agents is termed "the agency problem". Ross (1973) was amongst the first to research the agency problem, together with Jensen and Meckling (1976). Clarke (2007) consolidated the various agency problems into three overarching problems. He posits that the first problem emanates from conflicting interests and goals and the second problem is that of the difficulties of the principal to verify or monitor the behaviour of the agent to ascertain whether he or she is not being opportunistic at the owner's cost. The third problem noted is related to the risk posed by different actions of the principal and the agent when faced with risks to the investment.

Glinkowska (2015) argues that the underlying philosophy of the agency theory is based on McGregor's Theory X and that managers are solely motivated by the financial rewards of work, indicating that economic rationalisation is the basis of decision-making for such managers. Managers and shareholders are both utility maximisers and therefore tend to pursue own interests, giving rise to the agency problem (Jensen & Meckling, 1976). The agency problem can in brief be explained as conflict of interest. With the agency problem come the agency costs. Agency costs have been defined by Fama and Jensen (1983) as costs incurred by the shareholders in monitoring the activities of those charged with managing their investments. Of interest is the residual loss defined by Jensen and Meckling (1976: 308) as the "amount of the decrease in the market value of the company resulting from the company's failure to achieve the maximum profits or benefits that could have been achieved if the company's resources were directed entirely to the company's main activities, and not directing the company's resources towards or satisfying the non-monetary benefits of the agent and maximizing his/ her personal benefit".

Research gap: Agency theory claims that effective corporate governance practices reduce agency conflicts (Haniffa & Cooke, 2002). It has thus been widely accepted that agency costs can be reduced by implementing internal and external governance mechanisms. A synthesis of literature on agency theory and the agency problem revealed the following shortcomings in the sole application of agency theory in corporate governance studies by scholars:

i. Inasmuch as agency theory explains the findings of different studies, some aspects of corporate governance are not fully addressed. Deloitte's (2016) white paper on corporate governance highlights that the hard to measure relevant aspects of corporate governance such as individual decision-making behaviours are not explained by agency theory and its prescriptions.
ii. Agency theory exhibits narrowness in its behavioural assumptions, focusing on the financial self-interest behaviour of humans to the exclusion of other human motives. This assessment is supported by Kivisto (2008).
iii. Agency theory models rational individuals who are interested in furthering own interests while aiming for maximisation of their usefulness to their principals (Glinkowska, 2015). This study argues that individuals are not always rational but are rational in their irrationality and do not exercise any logical thinking or assessment when it comes to decision-making under

uncertainty. Rationality of their irrationality in this context would mean that only them (individuals) would understand the logical path of their illogical decision making as opposed to any other average person.

iv. Against the conventional wisdom of monitoring and sanctioning management as prescribed by agency theory, current codes of corporate governance, though mostly instituting internal corporate governance mechanisms, do not consider self-governance of the agents, i.e., the managers.

It therefore follows that theories that encompass other dimensions to corporate governance, particularly those to do with the human mind and/or individual motivation in decision-making, should be explored so as to better align with shareholder interests. This will consequentially inform rule setting, monitoring and sanctioning mechanisms to be applied.

2.2.4 The development of corporate governance reforms

This section presents a brief history of corporate governance and how it evolved to be the phenomenon it is today. The three main schools of thought on corporate governance are the stewardship, stakeholder and agency theories. According to Deloitte's (2016) white paper on corporate governance and firm performance, agency theory is the overarching theory for corporate governance and has been accepted as such by many scholars. This is confirmed by other authors, such as Barl and Means (1932), Jensen and Meckling (1976) and, in recent times, Fadun (2017). This section thus looks at the relevance of corporate governance and describes its dynamics in light of agency theory.

2.2.4.1 *The evolution of corporate governance*

Davies (2016) promotes the idea that corporate governance was developed from the concept of government, a concept which existed from the earliest times of social organisations and has been adopted in present day constitutions. The author asserts that the governing of firms started with charters that were employed in commercial voyages and enterprises such as the East India Company. Due to the scope and frequency of fraud being perpetrated in these enterprises, limited liability was born in

1856 and this led to most organisations becoming incorporated. As the corporations became more complex, the charters became the foundation of company law, making corporate governance multi-layered. Zabri, Ahmad and Wah (2016) confirm that corporate governance issues started with the birth of corporations. Incorporating companies together with internal growth of the companies, meant that there was a need for full time management.

Due to individual pension funds being channelled into equities rather than bonds, the shareholder profile changed with institutional investors growing in relevance as they demanded frequent and detailed briefing on the corporates' economic progress. The institutional investors could dispose of their stakes in whole or part if not satisfied with the particular corporate's progress and prospects, hence this demanded management accountability and transparency.

The Cadbury enquiry was instituted in the United Kingdom in 1992. The issues surrounding corporate governance intensified in the first half of the 1990s, a period which saw a wave of CEO dismissals (Zabri, Ahmad & Wah, 2016). This period was characterised by the massive collapse of big corporates in the United States, such as Enron and World.com, around the 2000s and led to the Sarbanes Oxley Act of 2002 which required companies to adopt effective and adequate internal control systems for their financial information. The same phenomenon was seen across the globe with different nations experiencing these unethical incidences at different times.

The Asian financial crisis of 1997 started with the stock market debacle in 1996 (Moudud-Ul-Huq, Zheng & Gupta, 2018; Rashid, 2018). The Malaysian Code of Corporate Governance (2002) and the Sri Lanka Code of Best Practice (1997) were issued with subsequent revisions thereafter. In Bangladesh, the regulatory board, the Securities and Exchange Commission of Bangladesh (SECB), announced the Corporate Governance Code of Best Practices in early 2006 (Rashid, 2018).

Figure 2.1 illustrates the evolution of corporate governance across the globe as reflected in literature. It is important to note that this timeline comprises only jurisdictions selected by the researcher as relevant to this study.

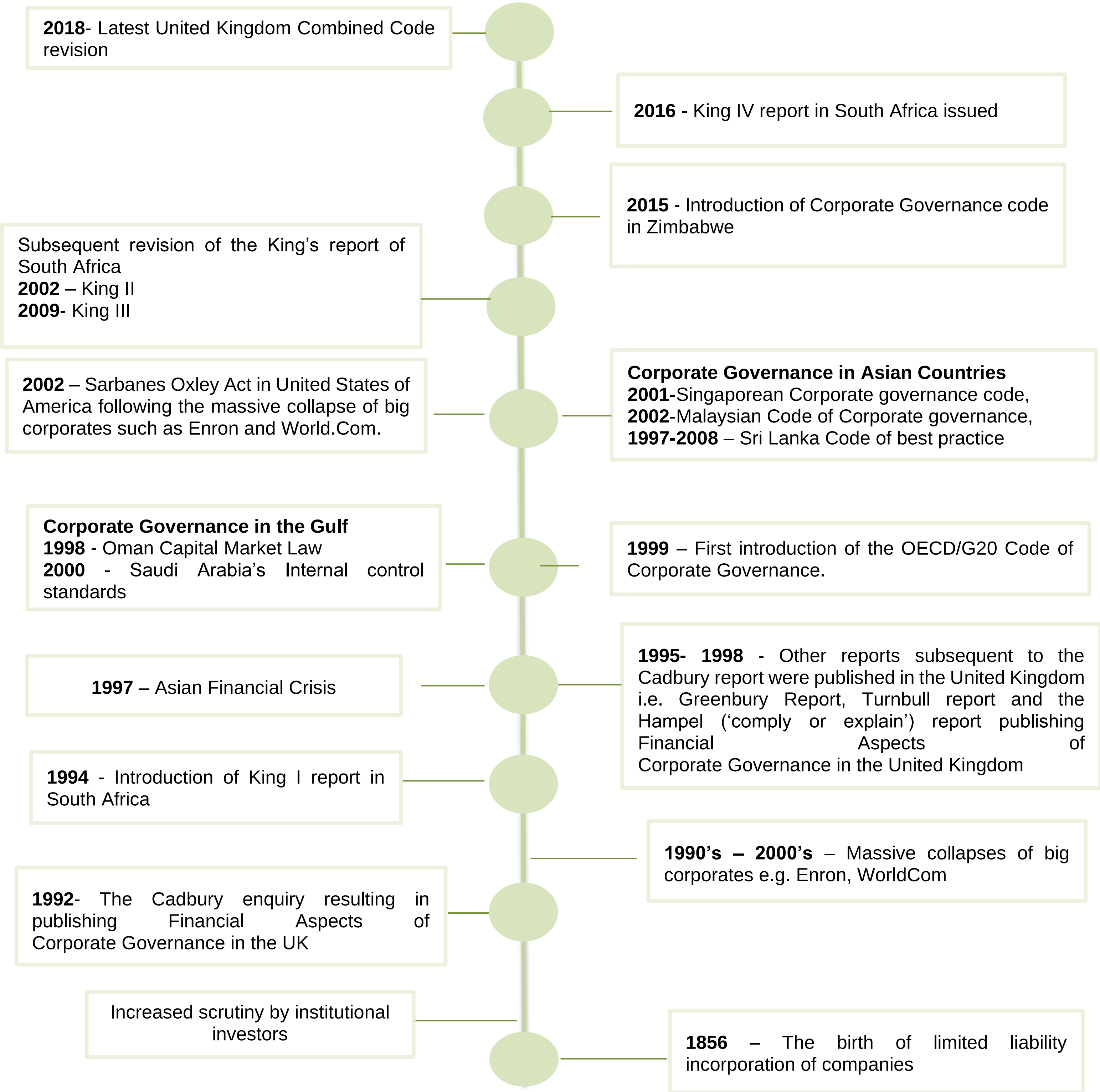

FIGURE 2.1: The evolution of corporate governance across the world

Source: Compiled with information from the literature review

Coming closer to this particular research setting, corporate governance prescriptions generally came late to Africa compared to other continents, with Zimbabwe registering its first code in 2016. South Africa was, however, amongst the pioneers with the setup of the King Committee. In 1994, the first King Report on Corporate Governance was published. Subsequent issues were published in 2002, 2009 and 2016; the latest version is known as the King IV report. Compliance to the King report on Corporate Governance was subsequently included in the JSE listings requirements for companies. South Africa and Zimbabwe have been selected for an analysis of the establishment of corporate governance in Southern Africa, which is the research setting of the study.

2.2.4.2 *Corporate governance in South Africa*

The King IV report was issued in 2016 and came into effect in April 2017 in South Africa. The King IV is the latest of the King reports, the first (King I) having been issued in 1994. Intermediate issues were King II (2002) and King III (2009). The first King report sought to align the new democratic South Africa to the capitalist market system, laying a foundation for institutionalised corporate governance (Dube, 2016). The King II report addressed changes in the economic and global corporate environment, while the King III gravitated towards integrated reporting and stakeholder inclusiveness. The King IV diverted from the King III concept of "apply or explain" and moved to the "apply and explain" concept and the "outcomes based" approach (King IV, 2016).

The King IV report was recommended for adoption by all organisations, regardless of their type of incorporation, sector or organisation, as the overarching aim of the report was to broaden acceptance of corporate governance (King IV, 2016). The King IV report comprises seventeen basic principles as opposed to the seventy-five principles of the King III. It is imperative to note that the King IV replaced the King III in its entirety.

The King reports, from the first publication to the King IV, set out the "philosophy, practices and outcomes which serve as the benchmark for corporate governance in South Africa" (King IV: 7). The underpinning philosophy of the King IV is sustainable development with the seventeen principles grounded in the following concepts: integrated reporting, corporate citizenship, stakeholder inclusivity and the organisation as an integral part of the society.

2.2.4.3 *Corporate governance in Zimbabwe*

Corporate governance in Zimbabwe is still in its infancy, with the first code of good governance having been released in 2015. The National Code on Corporate Governance (Zimcode) is a voluntary code which was issued in 2015. It became the maiden formal guidance on corporate governance in Zimbabwe and applies to all business entities. The Zimcode sets out the principles and respective recommendations for effective corporate governance in Zimbabwe. The code recognises the unique socio-economic and political environment Zimbabwe operates in and acknowledges that “one size does not fit all”. It therefore prescribes minimum standards for corporate governance, leaving management to “apply or explain”. This “apply or explain” approach the code is premised on is a form of gentle persuasion which encourages those charged with governance to do the right thing and take responsibility and ownership of corporate governance. Effectively, organisations are not mandated to implement each and every principle but are required to explain and justify the reasons for non-compliance. The fundamental principles of the Zimcode (2015) ride on the following concepts:

i. Multiple directorships are discouraged.
ii. Board chairman limits.
iii. Non concentration of power in one person.
iv. The overarching role of the board of directors.
v. Conflict of interest.
vi. Executive remuneration.
vii. Corporate disclosure.
viii. Conflict prevention.

Different jurisdictions have adopted corporate governance differently, on a macro level as countries and on a micro level as companies. The fact that each country is unique in its approach to corporate governance and has a particular context, has been reflected in the implementation of corporate governance initiatives. Some jurisdictions, like those of the United States of America and India, have applied the “comply or else” approach and others the “apply or explain” approach, for example, Zimbabwe. Still other countries, like South Africa, have an “apply and explain” approach. Some jurisdictions, for example, those of the United Kingdom, Kenya and most of the European Union, have adopted the “comply or explain” approach.

Jurisdictions such as those of South Africa and the United States have codified some good corporate governance prescriptions into law, however, under the assumption that directors act rationally in decision-making. Section 76 of South Africa's Companies Act (72 of 2008) protects directors against personal liability with the presumption that directors should act in good faith, with the care, knowledge, skill and diligence reasonably expected of a person in that role and in the best interests of the company. This is the business judgement rule. In addition, under Section 22 of the same act, reckless trading is prohibited in as far as gross negligence and fraud, including trading under insolvent circumstances, are concerned, again assuming directors act in the best interests of the shareholders. The Act, just like the agency theory and the discussed codes of corporate governance in different countries, has major weaknesses in that it fails to recognise that humans are complex systems beyond rational thinking and therefore act irrationally in matters of self-interest. This is explored further in Chapter 3.

Literature agrees that the solution to curbing the opportunistic behaviour of humans and thereby ensure preservation of shareholder value and good firm performance is primarily through mechanisms that monitor and sanction management, such as those discussed in the previous section. Codes of good corporate governance have thus put forth internal and external mechanisms that the board of directors can adopt towards achieving good performance.

Table 2.3 summarises the types of mechanisms prescribed by different codes of corporate governance.

TABLE 2.3: Codes of corporate governance and types of mechanisms prescribed

Code of corporate governance	**Type of mechanism prescribed**
United Kingdom – Combined code	Prescribes internal mechanisms for monitoring and sanctioning management, primarily through the board of directors.
King IV	Prescribes internal mechanisms for monitoring and sanctioning management, with governance outcomes of good performance, ethical leadership, effective control and legitimacy, primarily through the board of directors.

Code of corporate governance	Type of mechanism prescribed
Sarbanes Oxley Act	Prescribes Internal and external mechanisms. It is an arm of the law for monitoring and sanctioning management.
OECD Code of corporate governance	Prescribes internal mechanisms for monitoring and sanctioning management, primarily through the board of directors.
Zimcode	Prescribes internal mechanisms for monitoring and sanctioning management, primarily through the board of directors.

Source: Own compilation from the literature reviewed

Research gap: In conclusion, mechanisms of corporate governance for ensuring shareholder value and long-term firm performance suggest the monitoring and sanctioning of management. Firstly, through the board of directors and secondly, through legal regulations, for example, the Sarbanes Oxley Act of the United States of America. Unlike other corporate governance codes, King IV goes further, presenting corporate governance "as concerned with not only structure and process, but also with an ethical consciousness and conduct" of those charged with governance (King IV: 22).

Some scholars that have upheld agency theory as the underpinning philosophy for corporate governance have, however, pointed out some major weaknesses in the existing governance systems. For example, Margit and Frey (2005) argue against this conventional wisdom of monitoring and sanctioning management and suggest several measures which include self-governance of employees. In addition, some scholars have suggested that future research should focus on augmenting the provisions of corporate governance codes with qualitative aspects, such as board decision-making processes (Arora & Sharma, 2016; Singh et al., 2017). This view is supported by Akbar et al. (2016), who posit that corporate governance studies consider information or mechanisms that can practically be measured in absolute terms, steering clear of information that is not as observable. They suggest that future studies take cognisance.

The mechanisms highlighted above have been hailed by theory to be the solution to sustained firm performance; however, empirical studies have found the results of the influence on firm performance to be inconsistent, as is discussed in the ensuing section.

2.3 THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND FIRM PERFORMANCE: A REVIEW OF EXISTING EMPIRICAL STUDIES

This section reviews empirical studies on the interrelations of corporate governance and firm performance. Corporate governance has been hailed to be the foundation of sustained firm performance based on theory; however, empirically, the results of this influence have been mixed, as discussed in this part of the study. Below is a systematic review of studies done on this phenomenon. The analysis of empirical studies has been consolidated to assist in better understanding the traction gained thus far in studying the governance–firm performance relationship.

2.3.1 Systematic literature review of corporate governance and firm performance studies

This section reviews existing related literature on the interrelations of firm performance and corporate governance and offers a systemised summary of the current state of this body of knowledge. Major research databases were consulted, employing the systematic literature review methodology. Fink (2005: 3) defines a systematic literature review as a "systematic, explicit and reproducible method for identifying, evaluating and synthesizing the existing body of completed and recorded work produced by researchers, scholars and practitioners". Based on this definition, the literature review should be systematic and follow a specific methodology. It should be explicit in explaining the methodology followed and allow for others to produce the same output after having followed the same methodology, thus being reproducible.

Selection criteria

Twenty-six (26) journal articles published between 2009 and 2023 that examined the interrelations between corporate governance internal mechanisms and firm performance were identified for this study. The article search was done using the key words "corporate governance", "firm performance" and "firm value". Firm performance and firm value were used interchangeably in this search, as they refer to the same variable due to their having the same measures and outcomes, i.e., finance-based measures. The criteria for journal article selection were full text, peer reviewed and scholarly journals. The search was conducted in google scholar and various databases in the UNISA e-library.

Accessibility and relevance

Seventy-nine journal articles were accessible in the databases selected. Based on reading the abstracts, thirty-five studies were excluded. These were seen to be lacking in addressing the research objectives of the study. Eighteen studies were excluded next based on their research contexts being the developed world – this study's analysis concerned emerging economies. On the relevance of journals, at least 75% of the journals had to be research done in emerging economies. For this study, 21 studies out of 26, translating into 81%, were studies done in emerging markets, with the remainder (19%) having been done in the United States of America and the United Kingdom. Of the 26 journals selected, six (23%) were from the research setting, i.e. Zimbabwe and South Africa inorder to understand the specific economic and governance aspects of these economies.

Year of publication

Time limit searches were initially restricted to "2016 to current", current being 2023, and then extended to "2010 to current", depending on availability of the information being searched. This was done to gain an understanding of the most recent theorisation and thus keep the research more relevant to the current times. The time period was then further extended to "2008 to current", to increase the number of relevant articles extracted for analysis. Twenty-three (23) out of the 26, representing 88% of the articles, were post 2015 with only three articles (12%), from the period prior to 2015.

Table 2.4 is a summary of the 26 journal articles reviewed and their conclusions on the relationship under investigation with a detailed analysis of the relationship as put forth in literature ensuing.

TABLE 2.4: Summary of the relationship between corporate governance and firm performance from empirical studies

		Corporate governance mechanisms								
	Source	**Performance measure**	**Board size**	**Board independence**	**CEO duality**	**Ownership concentration**	**Activity intensity**	**CEO tenure**	**CEO compensation mix**	**Corporate governance index**
1	*Duong, Emanuel, Tuong and Dissen (2019)*	ROA							+	
2	*Bhagat and Bolton (2019)*	ROA, Tobin Q, Stock returns							+	
3	*Brochet, Limbach, Schmid and Scholz-Daneshgari (2019)*	Tobin Q						N		
4	*Rashid (2018)*	ROA, Tobin Q	+	-						
5	*Moudud-Ul-Huq, Zheng and Gupta (2018)*	ROA, ROE, Tobin Q, Cost efficiency								+
6	*Aktan et al. (2018)*	ROA, ROE, Stock returns (SPR)	+		+/-	+				
7	*Bhatt and Bhatt (2018)*	ROA, ROE, Return on invested capital								+
8	*Buallay, Hamdan and Zureigat (2017)*	*ROA, ROE, Tobin Q*	+	+/-		+/-				+/-
9	*Singh et al. (2017)*	Tobin Q	+	-	-	+				
10	*Fadun (2017)*	ROA, ROE	+	+				-		
11	*Zabri, Ahmad and Wah (2016)*	ROA, ROE, Tobin Q	-	-						
12	*Arora and Sharma (2016)*	ROA, ROE, Tobin Q	+		+/-					
13	*Limbach, Schmid and Scholz (2016)*	Tobin Q						U		
14	*Akbar et al. (2016)*	ROA, Tobin Q								-
15	*Abdallah and Ismail (2016)*	Not specified				-				
16	*Azeez (2015)*	EPS, ROA, ROE	-	-	-					
17	*Ahmed and Hamdan (2015)*	EPS, ROA, ROE	+	+	+/-	+/-				
18	*Shamsudin, Abdullah and Osman (2015)*	ROE, Tobin Q	-	-	-					
19	*Aebi et al. (2012)*	Buy and hold returns, ROE								-
20	*Ma and Tian (2009)*	ROA		+			-			
21	*Mangena, Tauringana & Chamisa (2012)*	Tobin Q, ROA	+			+			+	

		Corporate governance mechanisms								
	Source	**Performance measure**	**Board size**	**Board independence**	**CEO duality**	**Ownership concentration**	**Activity intensity**	**CEO tenure**	**CEO compensation mix**	**Corporate governance index**
22	*Nyakurukwa, (2022)*	Tobin Q, ROA								- (Tobin Q) + (ROA)
23	*Bussin, Wöcke & Deysel (2023)*	ROE, EPS, ROA							+	
24	*Nyakurukwa & Seetharam (2022)*	Tobin Q, ROA		+						
25	*Kok (2020)*	EPS, Sharpe Ratio	+	-					-	
26	*Erasmus, Viviers & Mans-Kemp (2017)*	EPS,								+(EPS) / -(Total share return)

***Note: +** - positive relationship; **-** - negative relationship; **+/-** - no significant relationship, **U** - inverted relationship, **n** - hump-shaped relationship*
***ROE** - proportion of earnings to owners' shareholding*
***ROA** - percentage of earnings to the total assets*
***EPS** – earnings per share*
***Tobin Q** - ratio of sum of market value of equity plus total debt divided by book value of total assets.*

2.3.1.1 *Board size and firm performance*

Of the 26 journal articles extracted, 12 researched the relationship between board size and firm performance including two in the context of South Africa and Zimbabwe. Scholars differed significantly on the direction of influence board size has on the performance of an organisation. Aktan et al. (2018) concluded that board size positively influences firm performance as measured by return on assets. In the studies of Bahrain firms, the scholars argue that the positive relationship could be due to wider expertise across fields that comes with larger boards, such that board decisions made would need to be acceptable to the majority of members. This view has been supported by studies done in India by Arora and Sharma (2016), who concluded that an increase in board size was only beneficial if it brought diversity to the board, consistent with the recommendations of the Cadbury report of 2002.

While most scholars found a positive relationship between corporate governance and firm performance (Buallay, Hamdan & Zureigat, 2017; Fadun, 2017; Singh et al., 2017; Rashid, 2018; Ahmed & Hamdan, 2015), others contradicted these findings. Zabri, Ahmad and Wah (2016); Shamsudin, Abdullah and Osman (2015); and Azeez (2015) found a negative relationship between the two variables. Azeez (2015), in his study of 100 Sri Lankan companies' annual reports for the 2010-2012 financial years, stated that small boards were more efficient, possibly through closely monitored management.

Closer to the research setting, Mangena, Tauringana and Chamisa (2012) found that large boards had a significant positive impact on performance in environments with severe economic and political crisis, having studied the economy of Zimbabwe post-presidential election period 2003-2005. Kok (2020) in his study of South African listed companies, posits that the positive relationship between board size and the incidence of a company being rated a high performing company is supported by the resource dependency theory, indicating that the Board enhances the ability of a company to attract requisite resources.

2.3.1.2 *Board independence and firm performance*

Out of the 26 journal articles extracted and analysed, 11 studied the relationship between board independence and firm performance including two in the delineated research setting, Nyakurukwa and Seetharam (2022) and Kok (2020). Only four of the articles found a positive relationship with firm financial performance (Nyakurukwa & Seetharam, 2022; Fadun, 2017; Ma & Tian, 2009; Ahmed & Hamdan, 2015). Fadun studied selected listed companies on the Nigeria Stock Exchange and concluded that board independence had a positive correlation with the ROA and ROE of these companies. He claimed that performance could be enhanced if there was a high ratio of independent directors on boards, thereby increasing investor confidence. This result is in line with agency theory which advocates recognition of external directors' responsibility to the shareholders.

Other scholars differed greatly with these scholars, reporting a negative relationship between board independence and firm performance (Zabri, Ahmad & Wah, 2016; Rashid, 2018; Azeez, 2015; Singh et al., 2017; Shamsudin, Abdullah & Osman, 2015). Arora and Sharma (2016), who conducted their study in India, postulated that the negative relationship was largely due to the concept of board independence still being a novel phenomenon in developing countries. However, Rashid (2018) asserts that this finding was not just peculiar to the developing countries but was also prevalent in developed economies. To support this notion, it was pointed out that the board of WorldCom had more than 50% non-executive directors; nevertheless, they could not protect the firm from bankruptcy (Kaplan & Kiron, 2004). Buallay, Hamdan and Zureigat (2017) collected data from 171 companies listed on the Saudi stock exchange

(TADAUWL) for the period 2012 to 2014 and found no significant impact of board independence on firm performance.

In the context of the research setting, Nyakurukwa and Seetharam (2022) found a positive relationship. Nyakurukwa and Seetharam (2022), however conducted the study in the post presidential election period 2002-2005, which period was charecterised by severe economic and political crisis in Zimbabwe. Kok (2020, p. 307) concluded that 'board independence is not a safeguard against financial catastrophes', recommending substantial instead of total independence.

2.3.1.3 *CEO duality and firm performance*

Six articles out of 26 investigated the relationship between CEO duality and firm performance. Out of these, three found a negative relationship between these variables (Azeez, 2018; Singh et al., 2017; Shamsudin, Abdullah & Osman, 2015). Azeez (2018) argued that the separation of the posts of CEO and chairman was in line with the amended 2008 corporate governance code issued by the Sri Lanka Exchange Commission following a number of corporate debacles that included Golden Key and Pamula Bank. Singh et al. (2017) state that the noted relationship could be due to the fact that power is concentrated in one individual, such that decision-making reflects the interests of that individual and hence CEO duality does not increase firm value.

Aktan et al. (2018) and Ahmed and Hamdan (2015) found CEO duality to have no significant influence on firm performance as measured by ROA, ROE and stock returns (SPR). This was echoed by Arora and Sharma (2016), who studied firms in 20 important industries of the Indian manufacturing sector covering the period 2001 to 2010.

2.3.1.4 *Ownership concentration and firm performance*

Six journal articles explored the relationship between ownership concentration and firm performance. Four of the articles found positive correlations between the two variables (Mangena, Tauringana & Chamisa, 2012; Singh et al., 2017; Aktan et al., 2018; Bhagat & Bolton, 2019). Aktan et al. (2018) argued that ownership concentration conceptually increased monitoring by the major shareholder(s), thereby protecting the firm. The scholars however noted that ownership concentration could potentially create benefits for the major shareholders at the expense of the smaller shareholders, repressing managerial initiatives due to vested excessive control.

Buallay, Hamdan and Zureigat (2017) divided ownership concentration into two dimensions, ownership of largest shareholder holding at least 20% and ownership of three largest shareholders holding at least 50% jointly. The study found that for the first dimension, there was no significant relationship with firm performance, whilst all three performance measures employed in the study, ROA, ROE and Tobin Q, showed a negative relationship with the second dimension. It was theorised that the negative relationship with the second dimension of ownership concentration was due to the fact that concentrated ownership created majority which then tended to pursue own interests at the cost of the minority shareholders, thereby affecting the firm performance negatively. Abdallah and Ismail (2016) also found a negative relationship between ownership concentration and firm performance in support of Buallay, Hamdan & Zureigat (2017).

2.3.1.5 *CEO tenure and firm performance*

Of the 26 articles selected for this study on prior empirical investigations, three investigated the effect of CEO tenure on firm performance. Fadun (2017) studied thirty (30) companies listed on the Nigeria Stock Exchange (NSE) in 2016 and found a negative relationship between CEO tenure and performance as measured by ROA and ROE.

Limbach, Schmid and Scholz (2016), in their study of all S&P 1500 companies over the period 1998 to 2011 as covered by ISS, formerly RiskMetrics, concluded that CEO tenure had an inverted U-shaped relationship with firm value. The investigation examined CEO tenure in terms of benefits from continued CEO engagement, i.e., experience, learning, relations and related costs of retention (CEO-firm mismatch, entrenchment, reluctance to change). The study was replicated in 2019 by the same scholars with the addition of Brochet. The study showed a hump-shaped CEO tenure-firm value relation. The scholars explained that firm value started to decline after a few years of CEO continued engagement. They however posited that the pattern was realised quicker in dynamic environments. The study detailed that CEO effect on firm value peaked after 8.6 years in dynamic industries and 13.8 years in less dynamic industries. On average, the turning point of firm value was 5.2 years, which was considered an economically meaningful variation.

2.3.1.6 *CEO compensation mix and firm performance*

Of the studies extracted for this literature review based on prior empirical studies, four investigated CEO compensation mix and firm performance, of which three were in the context of Zimbabwe and South Africa (Mangena, Tauringana & Chamisa, 2012; Kok, 2020; Bussin, Wöcke & Deysel, 2023). Mangena, Tauringana and Chamisa (2012) and Bussin, Wöcke and Deysel (2023) found positive relationship with the later claiming that this aligns with the agency behavioural theory. Kok (2020) however, argued that CEO incentives do not necessarily serve to align performance with shareholder expectations.

Duong, Emanuel, Truong and Dissen (2019) gathered data from 867 firms listed in the S&P Compustat database for the period 2006 to 2013. The conclusion was a positive relationship between issuing stock options to CEOs as part of compensation and firm performance. The scholars claim that stock options create incentives for CEOs to effectively manage the firm and hence improve performance. These results are consistent with the optimal contracting view of CEO compensation, whereby mixing the compensation of executives with stock options is expected to align CEO interests with those of shareholders, reducing incidences of decisions made based on self-interest. However, according to Kolev, Wiseman and Gomez-Mejia (2017), there are still doubts about the effectiveness of the CEO compensation mix to ensure shareholder wealth.

2.3.1.7 *Board activity and firm performance*

One article out of the 26 articles identified examined the relationship between board activity and firm performance. Board activity in the context of this literature review is the frequency of Board meetings (Ma & Tian, 2009). Ma and Tian (2009) investigated the relationship between corporate governance and firm performance for 1975 firms listed on the Shanghai and Shenzhen stock exchanges in 2003 and 2004 and concluded that the frequency of board meetings was negatively related to firm value. The scholars argued that hyper board activity was more reflective of inefficient decision-making by the board.

2.3.1.8 *Corporate governance index and firm performance*

The remaining articles, i.e., seven, investigated the impact on firm performance employing a combined corporate governance index. The articles revealed mixed views on the correlation of these two variables. Some of the scholars claimed that the relationship was positive (Moudud-Ul-Huq, Zheng & Gupta, 2018; Bhatt & Bhatt, 2018), with two indicating the opposite (Akbar et al., 2016; Aebi et al., 2012). One of the studies concluded that there was no significant relationship between the two variables (Buallay, Hamdan & Zureigat, 2017).

Erasmus, Viviers and Mans-Kemp (2017) and Nyakurukwa, (2022) found a positive relationship based on accounting measures having conducted studies in South Africa and Zimbabwe respectively. The positive relationship according to Erasmus, Viviers and Mans-Kemp (2017) would be explained by the supposition that management has some degree of influence over corporate governance compliance and earnings per share such that management actions tend to correspondingly have a bearing on the company performance. In terms of performance being measured by market based ratios, both articles indicated negative relationships with Erasmus, Viviers and Mans-Kemp (2017) explaining that high compliance costs and perceived window dressing have attributed to investor scepticism.

2.3.2 Fragmentation in the literature reviewed

Research gap: Current theorising, as supported by the discussion in Section 2.3.1, is fragmented on the direction of influence corporate governance has on firm performance. Based on the synthesis of this literature, there are mixed results on the relationship between corporate governance and firm performance. Some scholars reported positive relationships and some studies reported negative correlations, with others reporting no significant relationship between the two variables. There were also studies that reported mixed conclusions. These studies found that some corporate governance practices showed a negative correlation with firm performance when measured using one performance variable and a positive relationship when measured employing another performance variable. Rashid (2018) posits that such differing findings warrant further research on whether "one size fits all" corporate governance practices can be applied across all contexts. However, Moudud-Ul-Huq, Zheng and Gupta (2018) maintain that over time the relationship can shift. It remains a subject of debate whether adoption of corporate governance principles invariably improves firm performance (Aktan Turen, Tvaronavičienė, Celik & Alsadeh, 2018; Deloitte, 2016).

There is clear improvement in terms of the comprehensiveness of the different codes of corporate governance. All of the mechanisms identified above have already been included in most codes of corporate governance, such as those of the United Kingdom, United States of America, Malaysia, Bangladesh, Bahrain, India, South Korea, South Africa and Zimbabwe. What this research has noted as being relatively new and implemented by a few countries, such as South Africa, is the inclusion of ethical leadership and the need to create an ethical culture.

What the current codes miss is the prescription of governance practices that ensure that individuals that are inherently capable of leading and creating an ethical environment are appointed.

2.3.3 A review of existing causal frameworks

Many corporate governance–firm performance correlation studies explored have indicated direct causality inferences. The conditions are normally that corporate governance, being the independent variable, causes a change in firm performance, being the dependent variable. According to Schulz, Kushnir and Gopnik (2007: 6), a causal relation is thus defined “not in terms of its physical instantiation but in terms of the real and counterfactual interventions it supports”. It is against this background that a review of frameworks is found to be of importance in the attempt to understand the phenomenon.

Three frameworks were chosen for further exploration as their research settings were closely similar with the research setting for this study, which is that of an emerging economy, namely, those by Singh et al. (2017); Zabri, Ahmad and Wah (2016); and Ahmed and Hamdan (2015).

Below is a brief discussion of the conceptual frameworks proffered for these studies.

i. Singh et al. (2017) studied a data set of 324 listed firms in Pakistan. The relationship was modelled looking at board size, board independence, CEO duality and board committee as the independent variables, with the dependent variable, firm performance, measured based on Tobin Q. Ownership concentration was found to have moderating effects on this relationship. Figure 2.2 is the causal model outcome of this study.

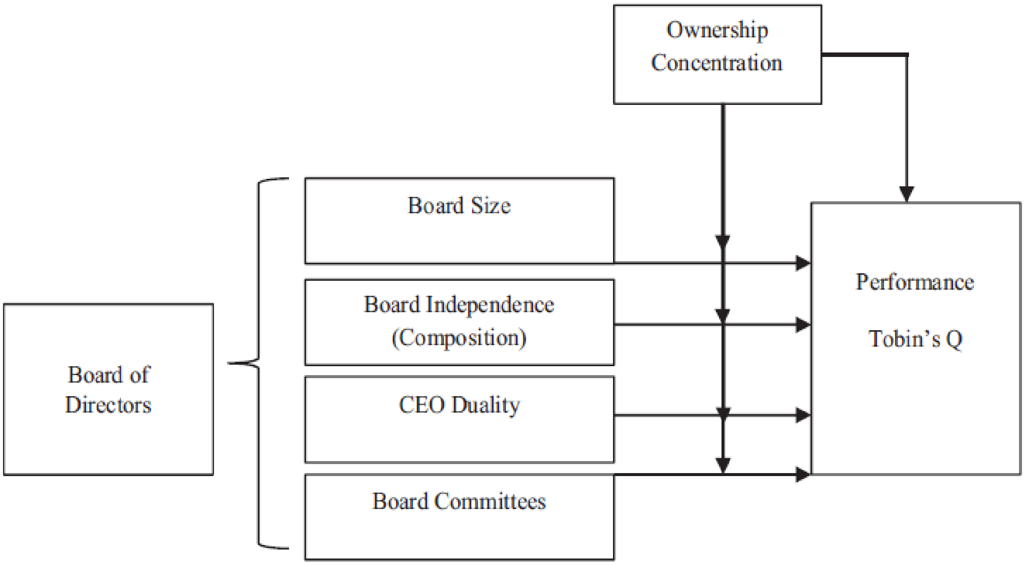

FIGURE 2.2: Corporate governance and organisational performance analytical framework

Source: Singh et al. (2017: 7)

The study found that board size and independence had a positive relationship with firm performance, while board independence and CEO duality were negatively linked to the Tobin Q performance measure. The relationship was however moderated by ownership concentration. The scholars concluded that more research was needed in emerging nations with larger samples, as only a few studies had been conducted thus far.

ii. Zabri, Ahmad and Wah (2016) proposed the model depicted in Figure 2.3 showing the causal relationship between corporate governance practices indicated by board size and board independence and ES, termed firm performance in the study, measured by ROA and ROE. Their empirical investigation involved Top 100 public listed companies on Bursa Malaysia. Four hypotheses were tested.

Hypothesis 1: There is a relationship between board size and firm's ROA.

Hypothesis 2: There is a relationship between board size and firm's ROE.

Hypothesis 3: There is a relationship between board independence and firm's ROA.

Hypothesis 4: There is a relationship between board independence and firm's ROE.

Figure 2.3 is the schematic representation of the hypothesised relationship.

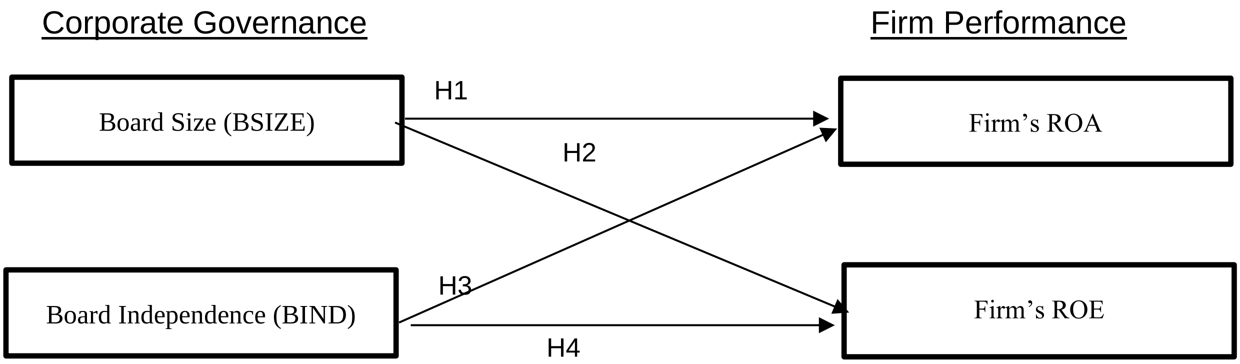

FIGURE 2.3: Corporate governance and firm performance relationship

Source: Zabri, Ahmad & Wah (2016: 290)

The study concluded that the relationship between board size and firm performance was negative as measured with ROA and insignificant as measured with ROE. It was also postulated that there was no relationship between board independence and firm performance.

iii. Ahmed and Hamdan (2015) investigated the impact of corporate governance on firm performance employing a sample of 42 out of 48 companies listed on the Bahrain Bourse for the period 2007 to 2011. The study found strong correlations between corporate governance and firm performance as measured by ROA and ROE; however, the relationship was insignificant basing on earnings per share (EPS). The study model for this particular study as shown in Figure 2.4 illustrates the hypothesised relationship as direct causation with performance variables being dependent on the corporate governance variables.

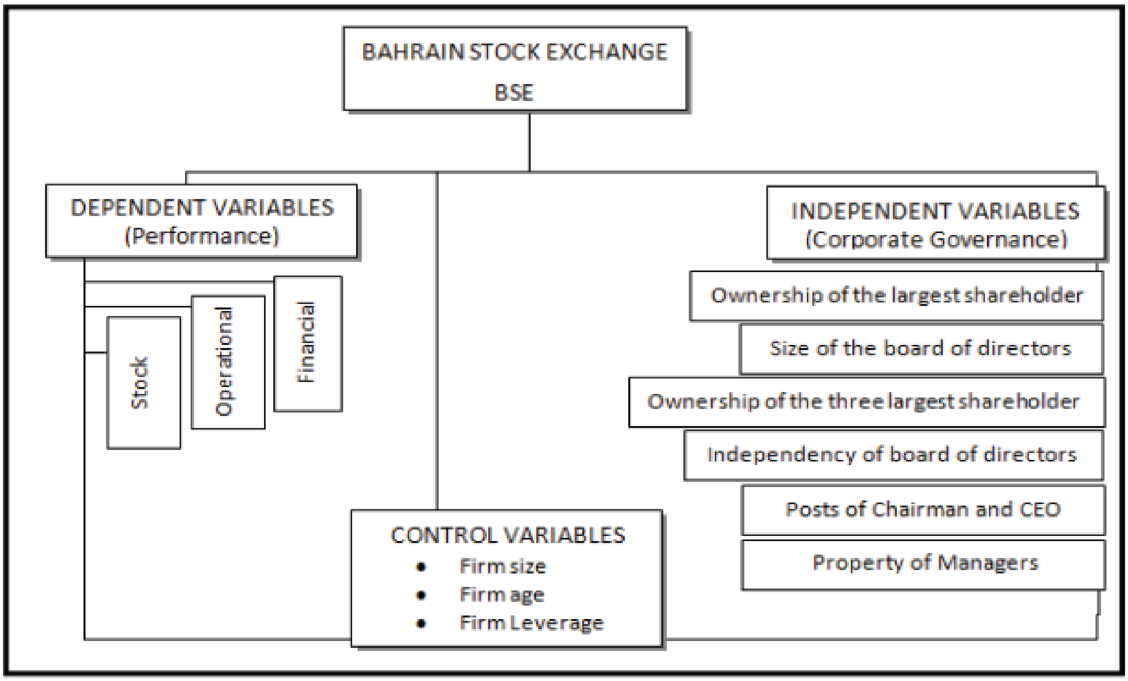

FIGURE 2.4: Theoretical framework model for the relationship between corporate governance and firm performance

Source: Ahmed and Hamdan (2015: 25)

The outcome of the study was that corporate governance principles significantly influenced firm performance as measured by ROA and ROE, with no significant change when measured by earnings per share (EPS).

2.3.4 Synthesis of the frameworks reviewed

Research gap: The frameworks presented in section 2.3.2 show that most frameworks used in the analysis of the relationship between corporate governance and firm performance assume a causal relationship that is not mediated by other variables. Save for control variables, mostly firm size, leverage and age, the relationship is assumed to be a direct causal relationship. Furthermore, there is a contextual gap noted with regard to corporate governance in emerging nations, with Singh et al. (2017) recommending more studies in emerging economies.

It is against this background that the current study explored whether there could be (other) human elements influencing this assumed direct relationship, thus attempting to explain the divergent conclusions on the relationship between corporate governance and firm performance.

2.4 CONCLUSIONS FROM THE LITERATURE REVIEWED

The synthesis of the literature reviewed in this chapter revealed a number of research gaps, which this study will endeavour to address. The following gaps have been noted:

a) There is consensus amongst researchers that corporate governance does, in one form or the other, influence firm performance.
b) Literature is fragmented as to the nature of the relationship between corporate governance and firm performance.
c) Even with institutionalised advancement in corporate governance practices offered, agency problems persist, eroding corporate value.
d) The frameworks proffered for the study of the relationship between corporate governance and firm performance are too simplistic in that they assume a direct causal relationship between the two variables, disregarding the effects of possible interventions by other variables.
e) Literature agrees on the relevant concepts of corporate governance and firm performance; however, aspects such as the psychology of the human self, particularly under conditions of uncertainty, impacting risk attitudes and therefore decision-making, have been altogether ignored.
f) Some scholars that have upheld agency theory as the underpinning philosophy for corporate governance have, however, pointed out some major weaknesses in the existing governance systems of monitoring and sanctioning management. They suggest augmenting the provisions of corporate governance codes with other aspects such as self-governance.
g) Not many studies on the corporate governance–firm performance relationship have been conducted in emerging economies.

These limitations have the effect of systematically altering the reported state of the relationship of corporate governance and firm performance, thus making it difficult to objectively assess the effects of corporate governance on firm performance. Van Rensburg et al. (2013) claim that even with the institutionalised advancement in corporate governance practices, agency problems persist, eroding corporate value. It is very difficult to objectively conclude why companies continue to fail in the wake of corporate governance and related reforms.

2.5 SUMMARY

In this chapter, the research question highlighted at the commencement of the chapter was answered. The chapter consolidated and analysed literature to shed light on the phenomenon under study. The chapter explained the evolution of corporate governance and highlighted some of the reforms in different jurisdictions. Current theorising on the relationship between firm performance and corporate governance was explored through a systematic review of prior empirical studies. A three-fold analysis was employed in this examination, namely, narrative analysis, causal frameworks and regression model analysis. It was concluded that literature pertaining to this phenomenon was fragmented and inconclusive. A gap in literature was identified as the potential effects of the psychology of the human self, particularly to do with individual risk attitude, on the corporate governance–firm performance relationship as it relates to individual decision-making. The next chapter further expands on the gap identified by exploring the theory of individual decision-making in light of risk and uncertainty.

3 CHAPTER 3: RISK AND CHOICE – UNBOUNDED IRRATIONALITY IN DECISION-MAKING UNDER UNCERTAINTY

3.1 INTRODUCTION

Individual decision-making is at the centre of most micro-economic analyses that determine the prosperity of an organisation. Simon (1947) defines choice or decision as a process by which a behaviour for each situation is picked as the best alternative. Most economic decisions in organisations require huge outlays of capital and other resources, including human logic. As such, some decisions made are not optimal due to operational and human limitations reducing individual and thus organisational rationality. Research has renewed its interest in human rationality, expanding on the bounded rationality concept to investigate the irrational forces of human reasoning and investigating real contexts in which decision-making takes place (Cristofaro, 2017; Hernandez & Ortega, 2019). Cristofaro (2017: 170) proposes that researchers "build a more holistic approach to the investigation of human rationality, conjointly applying sociobiological and behavioural perspectives to explain the real behaviour of people in organizations and society".

In this chapter, the following research questions are answered:

TQ 2: What is the impact of human rationality on individual decision-making as given in literature?
TQ 3: How may the psychological concept of human rationality be linked to individual attitudes in decision-making under risk and uncertainty?

3.2 THE DECISION-MAKING PROCESS

The decision-making process entails "choosing between alternative actions to which a result corresponds" (de Andreis, 2020: 288). According to the author, a decision cannot be called a decision if it does not correspond to a particular problem or goal. Edwards (1954) states that the theory of decision-making follows three tenets, that is, (i) there must be a choice of alternatives, (ii) the decisions are made in a non-random way and (iii) the decisions are goal oriented. From this perspective, the theory of decision-making is about goal-oriented behaviour chosen from an array of options in a non-random manner. De Andreis (2020) proposes a seven-stage operation process which consists of (i) describing the problem, (ii) analysing the causes of the problem, (iii) identifying alternative solutions, (iv) verifying the validity of the alternative solutions, (v) making a choice out of the alternatives, (vi) developing a plan for implementation and (vii) monitoring the implementation plan.

There are two types of decision theories, i.e., normative and descriptive (Hernandez & Ortega, 2019). Normative decision theories seek to prescribe how decisions should be made, while descriptive theories explain the real behaviour. Normative decision approaches are proponents of rational choice theory and link decision-making to expected utility. As to the descriptive approach, the pioneering proponents of this theoretical frame, Tversky and Kahneman found that "people very often do not reason in statistical and rational terms but would use the so-called heuristic strategies or cognitive bias" (de Andreis, 2020: 292).

Hernandez and Ortega (2019) posit that inasmuch as different philosophers and psychologists specifically concentrate on one type or the other, they more or less agree on the process of decision-making. According to Mintzberg's decision-making process, "first, we identify the problem, then, we collect information related to the problem; solutions are produced, alternatives are evaluated and finally selected among them" (Hernandez & Ortega, 2019: 4). This can be extrapolated to mean that not having alternatives to choose from would also constitute an alternative. Figure 3.1 below shows the process adapted from the authors.

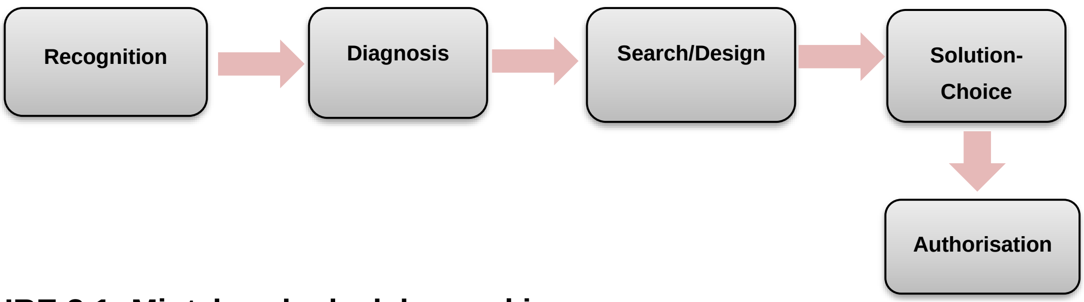

FIGURE 3.1: Mintzberg's decision-making process

Source: Hernandez and Ortega (2019: 4)

Solving a problem cannot be a linear or a sequential process; it is a cognitive process riddled with complexity (de Andreis, 2020). Contrary to suppositions by early theories of decision-making which predominantly linked decision-making to rational choice, it has now become apparent that decision-making is far from rational due to the effect of factors such as emotional and hedonic motivations (de Andreis, 2020). This makes decision-making under risk and uncertainty very complex, hence worth researching to better understand its impact on corporate governance and firm performance.

3.2.1 Decision-making under risk and uncertainty

Bentham (1948) argues that the two motivations of any human action are to (i) reduce uncertainty and (ii) gain opportunity. Uncertainty can be defined as the lack of certainty which can be inferred to mean "limited state of knowledge, in which it is impossible to describe exactly the existing state, future results or more than one possible result" (de Andreis, 2020: 289). De Andreis (2020) explains that risk can never be separated from uncertainty in that risk assumes the dimensionality of a state of uncertainty in which there is a probability of an adverse outcome from the decision taken.

The assessment of risk, when choosing between alternatives in conditions of uncertainty, becomes key. It is dependent upon experience and the individual perception of risk. Higher levels of risk become acceptable due to the stress associated. According to de Andreis (2020: 295), "the attitude of invulnerability then tends to prevail". Individual risk attitude and its dimensions are discussed further in section 3.5. The ensuing section elaborates on what motivates decision-making.

3.3 HUMAN MOTIVATION AND DECISION-MAKING

Theories of human motivation are herein discussed with a view to understanding what motivates decision-making. Thomas Hobbes, Sigmund Freud and Abraham Maslow had different views about human motivation which, however, had one common denominator: *self-interest*. Hobbes called it "self-interest", Freud "desires" and Maslow "needs".

3.3.1 Hobbesian view of human motivation

Thomas Hobbes (1588-1679) was one of the major contributors to the modern theories of human rationality and choice. Hobbes depicts human nature as naturally mean and selfish (Zey,1998). According to the philosopher, all human motivation is self-serving and seeks to maximise at every turn in decision-making. He posits that a man's mission is to garner as much power as possible so as to live a good life. Because everyone is vying for the same good, there is bound to be human conflict and competition such that if any two people desire the same thing, they become enemies and it becomes a war of power. People therefore exist in a state of “savage self-interest”, without regard for societal gain (Hobbes, 1968).

In support of the Hobbesian view, Williamson (1975: 9) defines humans in market economies as opportunistic and “self-seeking with guile”, translating to humans being cunningly selfish by nature. The view is shared by Jensen and Meckling (1976), as explained in Chapter 2 on agency theory. According to Hobbes, bringing society to an equilibrium requires social contracts to guide people on what is good or bad (Zey, 1998).

The following are the major propositions of the Hobbesian theory in relation to decision-making as deduced by this study:

i. The natural self-interest of humans, which Hobbes calls the “savage self-interest nature of man”.
ii. Competition, diffidence and glory as the key antecedents of conflicts within organisational societies, i.e., the war of power
iii. The need for social contracts to maintain peace and governance.

The Freudian view is discussed next.

3.3.2 Freudian view of human motivation

The psychoanalytic theory propounded by Sigmund Freud in 1910 endeavoured to explain the nature of the human psyche. Freud argued that human behaviour was the result of interactions of different forces of the mind, forces he termed id, ego and superego (McLeod, 2019). The theory claims that unconscious internal conflicts among the forces ultimately shape behaviour and personality.

Freud described the id as purely unconscious and unorganised. The id is related to the pleasure principle. Freud postulated that the ego was a developmental extension of the id and was akin to perception and reason but mediated between the demands of the id of instant gratification of its instinctual urges and the more stable and disciplined super-ego. Figure 3.2 is Freud’s Structural model of the psyche.

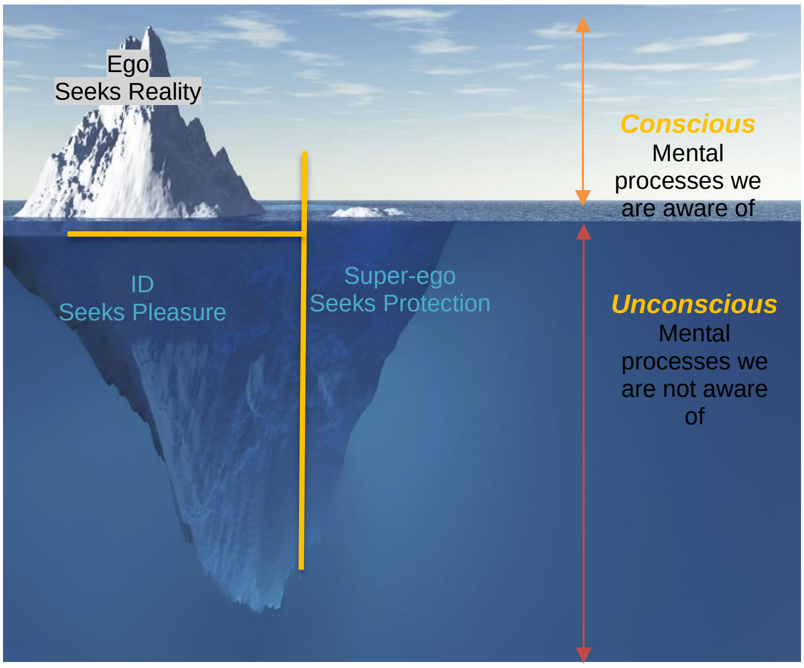

FIGURE 3.2: Iceberg: Structural model of the psyche

Source: Own illustration based on information from Freud and Bonaparte (1954)

The following are the major propositions of the Freudian view as it pertains to this study:

i. Human behaviour as a result of interactions of different forces of the mind, forces which are always in conflict. This eventually led to feelings, emotions and thoughts seen to be associated with the unconscious conflict.

ii. The human self as a psychical identity, unknown and unaware since the

iii. It therefore means that all decisions are made to fulfil the deep-seated unconscious desires since the psyche is predominantly under the influence of the selfish pleasure id.

As was also observed with the Hobbesian view, the Freudian view is also that, decisions are motivated by self-interest such that self-preservation becomes key in all decision-making. Maslow's view is discussed next.

3.3.3 Maslow's view of human motivation

Abraham Maslow formulated "A theory of human motivation" in 1943; this became what is now commonly known as Maslow's hierarchy of needs. Maslow's assumptions in his human motivation theory were that humans are wanting beings, constantly chasing one need after the other, but recognising the hierarchical importance of the different needs

(Trivedi & Mehta, 2019). Human behaviour, according to Maslow, is therefore related to needs.

In Maslow’s hierarchy of needs, wants or needs are categorised into levels where the lower order needs would have to be satisfied before moving to the higher order needs (Őnday, 2016). The lower order needs, according to Maslow, are physiological needs which simply denote survival, with the higher order needs being all needs related to self-actualisation. In between these two levels there are the safety needs; social needs which include social belongingness and love; and self-esteem. According to Maslow, the physiological needs are the strongest as they always come first before moving to other levels of satisfaction. Figure 3.3 is the Maslow Hierarchy of needs pyramid.

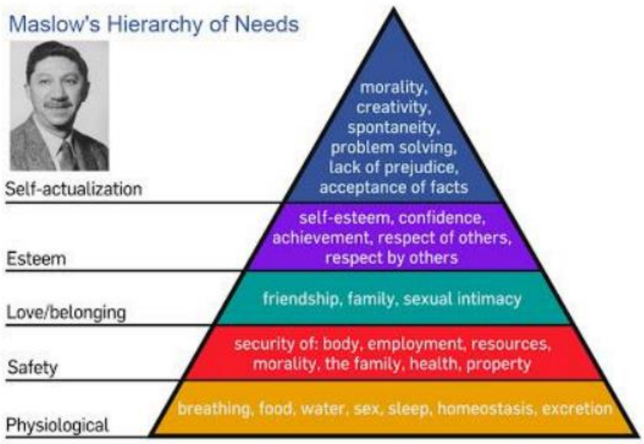

FIGURE 3.3: Maslow’s hierarchy of needs

Source: Trivedi and Mehta (2019: 39)

Trivedi and Mehta (2019), nevertheless, point out that the nature of the needs as given by Maslow is varied and diversified. The scholars also argue that inasmuch as there is emphasis on the hierarchical importance of the needs, the human psyche is a complex system that runs concurrent motivations across hierarchies. As such, certain needs might dominate relative to the satisfaction terms identified by Maslow of "relative", "general" and "primarily" (Trivedi & Mehta, 2019: 38).

The following are the study’s deductions made from Maslow’s view:

i. Humans as wanting beings that are constantly chasing one need after the other.

ii. Human behaviour as primarily driven by needs, which needs are in a hierarchical order of importance.
iii. Basic needs as they pertain to an individual as the needs that tend to be prioritised over all the other needs.

Because humans follow a pattern in decision-making that is linked to the hierarchical importance of their needs, it follows that all decision-making by an individual is primarily focused on self-interest.

3.4 THE THREE STATES OF HUMAN RATIONALITY AND DECISION-MAKING

It is important that the study of rationality in social sciences and its impact on decision-making be taken from Adam Smith to Herbert A. Simon to the recent phenomenon of unbounded irrationality so as to understand the principal paradigm shifts. Nickerson (2004:390), in his extensive review of literature relating to rational behaviour, presents two questions that he claims to be fundamental to the full understanding of rational behaviour: “What is rationality?” and “Is human reasoning rational?”. He goes on to explain that “in order to evaluate a conception of rationality, one must, at least implicitly, appeal to a view of the validity of which one has presupposed…” (Nickerson, 2004: 390). It therefore follows that to fully explain the concept of rationality one must individually define the standards, norms and values against which rational behaviour is determined.

Nickerson (2004: 390) offered choices to the readers of “Yes, No and Yes and No”. Most research on this topic has moved away from binary answers to more elaborate responses that include acute reasoning and thus consider the conditions and the environment in which the questions are asked. The following sections attempt to answer these questions in light of the rational choice theory (perfect rationality), bounded rationality theory and the relatively novel unbounded irrationality as guided by a review of literature on decision-making.

3.4.1 Adam Smith’s perfect rationality

Adam Smith in his writings prior to the 1900s predominantly penned humans as “reasonable persons”, as in “The wealth of nations” (Simon, 1972). Under the auspices of rational systems, organisational rationality is a function of actions taken by well-coordinated and determined agents. Rational choice can be defined as "the process of determining what options are available and then choosing the most preferred one according to some consistent criterion" (Levin & Milgrom, 2004: 1). The definition entails that rational choice be governed by the optimisation concept. Rationalisation in decision-making is therefore concerned with real-valued utility maximisation.

Adam Smith posited that individuals made choices in their own interest (Levin & Milgrom, 2004). Aumann (1997) explains that rational choice assumes that a person in a decision situation has all the information available and that probability estimates of each alternative are realisable, such that there is a complete and consistent system that allows for a perfect analysis. Classical and neoclassical economists like Walras (1883) believed that the rational man or woman had unlimited cognitive capabilities and that behaviour was fixated on maximising his or her own expected utility. In other words, the rational choice theory assumes optimality of the chosen alternative, i.e., real-valued utility maximisation.

Real-valued utility maximisation is related to the concept of *'pareto optimality'* and was noted to be a characteristic of self interest in dyads and groups, such that no individual self-interest could be fully pursued without compromising the other's self-interest. According to Smith, this characteristic plays a crucial strategic role in the rational behaviour of humans.

Nickerson (2008) explains what it means to be rational. The author argues that to support rationality requires the following:

i. There must be consistency between beliefs and actions, i.e., the resultant observable behaviour must be supported by the underlying individual beliefs and norms.
ii. It should be skewed towards one's own goals and aspirations, as rationality is goal oriented. Nickerson is however quick to note that individual goals might cause inner conflict in individuals. He also points out the subjective nature of rationality and goal orientation, noting that what might be a rational service of a goal for one individual might not be for another.

iii. There should be an obligation to exert mental effort. This characteristic of rationality suggests that behaviour resulting from whatever stimuli is not intuitive but rather well thought out.

The author sets out many other criteria for the determination of rationality. These include openness to evidence, trial by exposure to tests and "balance between freedom and constraint, imagination and criticism, conjecture and refutation" (Nickerson, 2008: 411).

Research gap: From the above reviewed literature, complete rationality posits that humans have predisposed preferences which they seek to satisfy through choices. Managers attach expected utilities to options, making most choices consistent. Rational choice theory, however, does not explain how decision-making changes under conditions of uncertainty where the outcomes of the decisions to be made are not known.

Research gap: The rational choice theory assumes that all self-interest is economic or financial (Zey, 1998). According to Zey (1998: 101), "broadening the definition of rational behaviour to include all bases… recognition of affective, valuative, and habitual bases of action" would be beneficial to understanding decision-making. Bower (1983) posits that the underlying assumptions of the rational choice theory are very simple and pervasively lack realism.

Herbert A. Simon's bounded rationality recognises the effect of cognitive limitations and is discussed next.

3.4.2 Herbert A. Simon's bounded rationality

Empirical failings of the rational choice theory in both economics and psychology experiments (Levin & Milgrom, 2004) led to other approaches to decision-making being introduced, such as Simon's bounded rationality model. In his famous work "The administrative behaviour" in 1947, Herbert A. Simon actively challenged the concept of perfect rationality that was the leading and acceptable explanation of rationality in scientific research until the middle of the twentieth century. Simon, influenced by earlier psychologists such as Freud as well as Barnard's (1938) fallacious man, pointed out the innate biological and therefore rational bounds of humans. He proposed a model of the "administrative man" who seeks to *satisfice,* moving away from the dominant “economic man” who was concerned with utility maximisation, modelled by the early philosophers and economists.

Simon argued that human behaviour was intentionally rational, but in a bounded way. This claim became Simon’s major contribution to the economics of organisations and nations. Simon elaborated that human behaviour satisfied, i.e., chose a good enough alternative, because of the lack of capacity to maximise. Some scholars, in support of Simon, have pointed out the limited abilities humans have in processing the amount of information required to make a rational choice (Tversky & Kahneman, 1986; Conlisk, 1996).

Bounded rationality is the idea that choices “are determined not only by some consistent overall goal…, but also by the knowledge that decision makers do and don’t have…, their ability and inability to evoke that knowledge when it is relevant…, to conjure up possible courses of action, to cope with uncertainty and to adjudicate among their competing wants” (Simon, 2000: 25). Neuropsychological factors affect the ability to receive, retrieve and process information and language inhibitions affect articulation of certain subjects, all which factors inherently limit rationality (Hernandez & Ortega, 2019). In conclusion, Simon’s major propositions of the bounded rationality theory were founded on two major limitations i.e., information asymmetry and lack of cognitive capacity to process the information.

Research gap: Simon was of the view that rationality was bounded due to cognitive limitations associated with information asymmetry and incapacity to process making humans susceptible to systematic errors. Bounded rationality does not, however, place emphasis on other cognitive biases that affect decision-making such as affect, heuristics, emotions, overconfidence and situational and social biases. These are said to be responsible for the irrationality exhibited by humans in decision-making (Zey, 1998).

Unbounded irrationality, which extends on Simon’s bounded rationality is discussed next as an alternative gateway to better understand the phenomenon under study.

3.4.3 Unbounded irrationality

Grayot (2019) postulates that extensive experimental research and interdisciplinary collaboration between psychologists, economists and neuroscientists have produced vast evidence of anomalies that prove that humans are not rational, challenging the orthodox economic theory of rational choice pioneered by Adam Smith. Gardner (1993) cites akrasia or failure of rational control as evidence to support this assertion. The author explains that people often act in ways that are inconsistent with the reasonably best alternative.

Dawes (1988) and Kornov and Thissen (2000) argue that decision-making does not follow a rational pattern but is affected by habit, norms and values, tradition, past experience, preferences, expectations and other such subjective principles. A decision situation is therefore affected by preferences (likes) and perceptions (sees). This analysis expands on Simon’s theory by taking cognisance of the effect of norms, values, emotions, affect, heuristics and past experiences in addition to the cognitive capabilities’ limitation of information asymmetry and capacity to process.

Davidson (1982) explains that desires cause beliefs which then influence one’s decision-making. Cristofaro (2017) supports this notion, highlighting that decision makers’ limits are influenced by their feelings, with Vazsonyi (1974) citing the driver of inconsistent behaviour as uncertainty. Vazsonyi proposes that to solve the inconsistency, there is a need for people to recognise their own irrationality. He, however, believed that this would then give birth to a rational approach to irrationality which would promote a more aseptic behaviour in decision makers.

As was highlighted in Section 3.4.1, a common characteristic of rationality is internal consistency of beliefs and behaviour. Dawes (1988) notes that inconsistency is the essence of irrational behaviour. He further maintains that a mere change in the wording of a situation would evoke a whole new different response, supporting his claim of irrationality. This cognitive bias is termed “framing”. Tversky and Kahneman (1986) also wrote extensively on framing and its effect on decision-making.

Davidson (1982: 303) posits that recognising “the mental causes that are not reasons for the mental states they cause" is fundamental to understanding behaviour. Besides known beliefs and wants, mental attributes can combine, “as in intentional action, to cause further events in the mind or outside it” (Davidson, 1982: 291). This proposition explains the principle of intentional actioning which is related to rational utility maximisation. However, these actions serve as causes and not reasons for the actions, which reasons might not be intentional, thereby irrational. In other terms, “certain mental events take on the character of mere causes [i.e., causes that are not also reasons] relative to some other events in the same mind" (Davidson, 1982: 300).

An article search with "unbounded irrationality" in its title or content only brought three articles, two of which are discussed below, indicating the novelty of the concept.

Stein (2003) in his article titled, "Unbounded irrationality: Risk and organisational narcissism at Long term Capital Management (LTCM)" researched on the near collapse of LTCM in September 1998. Stein refuted the idea that organisations collapse due to information asymmetry and or capacity to process current data, which idea talks to bounded rationality. Stein concluded that the collapse at LTCM was due to unbounded irrationality of those in executive management born of organisational narcissism.

Chakrabarty, Mondal and Banerjee (2010: 1) in their article "Irrationality unbounded – More risk, more incentives" agreed with the notion that the "rational man in financial theory is not always the same as the man in real life". The authors concluded that biases such as overconfidence and frame dependence and their snowball effect on incentives for pursuing and transferring risks were the prime source of irrational behaviour by an otherwise rational economic man.

Research gap: The two articles however did not give a definition or a coherent description of unbounded irrationality. To put unbounded irrationality and decision-making into perspective, a description from which a definition can be deduced is thus required. This is the subject of section 3.4.3.2.

Below is a discussion of cognitive biases that extend on Simon's cognitive limitations of information asymmetry and capacity to process limitations giving rise to unbounded irrationality in decision-making.

3.4.3.1 *Cognitive biases and unbounded irrationality*

Cognitive processing research has identified decision maker utility, affect and heuristics as the three major influences of information processing and evaluation (McCaughey & Bruning, 2010). Heuristics are mental processes that enable the solving of a problem in situations of uncertainty, that is, with limited knowledge and or time (Sternberg & Pretz, 2005). An individual’s repetitive use of certain procedures and cognition invariably results in specific automatic ways of information processing. When the decision-making situation is riddled with complexity, these automatic processing ways become domineering, such that cognitive shortcuts are then employed to come up with a decision.

‘Affect’ shapes the way in which situations are perceived, the motivation for the particular decision, the risk tolerance associated with the decision as well as the degree of information recall exhibited by the individuals (McCaughey & Bruning, 2010). Framing of decisions which emanates from how an individual perceives a problem, envisages the outcome coupled with the contingencies associated further contributes to the irrationality exhibited in decision-making (Tversky & Kahneman, 1981). Wyer and Srull, (1980; 1986) posit that final cognitive outcomes are informed by previous experiences, desires and goals. McCaughey and Bruning (2010: 4) conclude that it is “the attachment of individual goals to the processing of information that presents an opportunity for subtle influence on policy decisions”.

Bazerman and Gino (2012) posit that social and situational forces also influence the moral and ethical standing of the subject that decides. They cite Cialdini, Reno and Kallgren (1990) to the effect that the amount of rubbish in a certain environment prescribes the appropriate behaviour with regard to littering in that environment. The scholars further postulate that people’s behaviour or how they perceive risk is also determined by the behaviour of other people in the respective society, to include even their moral perceptions. When exposed to an unethical society or grouping, individuals tend to align with those same behavioural tendencies (Gino, Ayal & Ariely, 2009). Lerner and Keltner (2001) found that emotions such as fear and anger had an effect on how risk was perceived by individuals. The authors explained that fearful people tended to be risk averse while angry people were risk seeking in terms of choice.

This study posits that the organisation as a social system interacts with individuals that have different values, beliefs and desires, such that organisational rationality is a function of the rationality of the decision makers who are these individuals. Individual rationality therefore has a significant influence on the theory of organisations as it pertains to corporate governance–firm performance interaction.

Research gap: Due to cognitive biases, perfect rationality as posited by perfect rationality/rational choice theory does not apply in reality, and as such the concept of bounded rationality by Simon takes precedence at that juncture. However, bounded rationality at its core is the realisation that humans are cognitively limited in terms of information asymmetry and capacity to process information, hence their rationality is bounded. The concept of unbounded irrationality extends on Simon's concept to recognise other cognitive biases which include but not limited to heuristics, affect and emotions that stem from all areas of an individual's life and feed from self-interest to preserve the self. There are a lot of other cognitive biases, not discussed herein, that shape decision-making under risk and uncertainty.

Unbounded irrationality as it pertains to this study and guided by the literature reviewed therefore supposes that *people are guided by cognitive biased self-interest in making choices and therefore act irrationally under conditions of risk and uncertainty*. When an individual has certain unsatisfied needs or interests or desires, they therefore tend to act in a manner that can be considered unboundedly irrational to satisfy these and their risk attitudes hence become unreserved. In fact, this is the rationality of the irrationality of decision-making.

3.4.3.2 *Unbounded irrationality description from adjacent literature*

As the unbounded irrationality concept has hardly been studied, it is important that it be described as it pertains to this study. The definition of unbounded irrationality as determined by the literature reviewed is further explored through subject matter experts in Chapter 6 of the study. Self-interest and hence self-preservation has been seen to guide decision-making under risk and uncertainty, however as influenced by various cognitive biases.

Table 3.1 is a summary of the differences between perfect rationality, bounded rationality and the nature of unbounded irrationality as deduced from literature.

TABLE 3.1: Comparison of perfect rationality, bounded rationality and unbounded irrationality

Perfect rationality	Bounded rationality	Unbounded irrationality
Unbounded cognitive ability of the subject who decides.	Necessity of assistance of the bounded mental capacity of the subject that decides.	Automatic cognitive capacities of the subject that decides.
Knowledge of all available actions.	Knowledge of an acceptable set of actions.	No regard for knowledge of available actions.
Numerical knowledge of all the consequences of actions.	Approximate and heterogeneous knowledge of the consequences.	No regard for knowledge of available actions.
Stable and ordered preferences.	Evolutionary and unsettled preferences.	Deep-seated self-interests become default preferences.
Unbounded or non-influential resources in the decision-making process.	Temporary and cost limitations that affect the quality of the decision.	No regard for availability of resources in the decision-making process.
Search for the best possible result.	Search for a satisfactory result.	Search for a result that seeks to satisfy the individual self-interests.
Inform the one who decides what to do.	Help the one who decides to understand what will happen if he or she does something.	No prior understanding of what will happen if a certain action is taken.

Source: Adapted from Hernandez and Ortega (2019: 3) for perfect rationality and bounded rationality with own interpretations based on literature for unbounded irrationality

Unbounded irrationality in people as deduced from the reviewed literature exhibits the following:

i. Automatic cognitive capacities of the subject that decides.
ii. No regard for knowledge availability of alternatives.
iii. Deep-seated self-interests become default preferences.
iv. No regard for availability of resources – financial, time, etcetera – in the decision-making process.
v. No prior understanding of what will happen if a certain action is taken, hence actions are attitudinal as opposed to reflective.

Given the above discussion on human rationality in determining behaviour that impacts organisational prosperity and governance, it is thus important to further explore the phenomenon in relation to individual risk attitudes, which are born of cognitive biases in all the domains of life.

3.5 INDIVIDUAL RISK ATTITUDES AND THE PARADOXES OF UNBOUNDED IRRATIONALITY

In this section, the unbounded irrationality phenomenon is discussed within the sphere of individual risk attitudes/risk attitudes. The section commences with the clarification of the concept of risk attitude. Risk attitude domains are explored with a view to understanding the mental and physiological environment of the subject that decides. Linking the concept of individual risk attitudes to unbounded irrationality in managerial decision-making concludes the section.

3.5.1 Individual risk attitude – clarification of the concept

To craft a definition of risk attitude as it pertains to this study, the research first examines definitions of attitudes given in psychology literature. Next risk is defined and combined with the definition of attitude, culminating in a functional definition for the study.

Murchison (1935) claims that the term attitude is not the property of any one psychological school of thought, hence it is adaptable to different studies. He further posits that the term is elastic and therefore applies to either dispositions of individuals or to broad cultures. Some of the earliest psychologists to use the term were Herbert Spencer in 1862 and Alexander Bain in 1868 who appreciated the power of the different forces of the mind in formulating attitudes.

Eagly and Chaiken (1993: 1) offer an abstract definition of attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour”. Evaluative responses are born of beliefs, thoughts, feelings, emotions, intentions and overt behaviour (Eagly & Chaiken, 2007). These responses are directed at a certain entity, for example, a person or an occurrence. The presence of an entity holds the stimuli that provoke the evaluative responses which can be called attitudinal.

The Dictionary of Psychology defines attitude as specific mental disposition towards a new experience or a condition of readiness for a particular action (Warren, 1934). Fazio (1995) describes attitude as object-evaluation associations. The author argues that attitudes lie deep in memory as object-evaluation associations, such that if the associations are strong enough, automatic evaluations are triggered upon encountering object relevant stimuli.

A synthesis of these definitions reveals a number of key aspects of attitudes – tendency, attitude object or entity and object-evaluation associations. Having gained an understanding of what attitude is, the research next explores the definition of risk in order to ultimately proffer a functional definition of risk attitude. Mishra and Lalumière (2017) define risk as an “outcome variance”. This is the definition commonly used across disciplines such as behavioural sciences, biology, economics and psychology.

This study agrees with Mata, Frey, Richter, Schupp and Hertwig (2018) and Caspi, Roberts and Shiner (2005) that risk attitudes or preferences can be seen as a stable psychological trait that can also show systematic and sizable changes in response to specific shocks such as life stages, monetary shocks and situations. At an organisational level, risk attitudes underlie a wide range of decisions, from product design and human resources practices such as recruitment and selection and compensation to acquisition decisions (Greve, 2003; Malhotra, 2010; Thornton, 2001). According to Su and Liu (2018), risk-taking attitudes are highly information-asymmetric and have effects on sustained firm economic prosperity. Risk attitudes are the foundation of decision-making, be it at individual or organisational level. Risk attitudes are an inherent feature of organisational decision-making (Kilduff, Ordoñez & Schweitzer, 2018), whether exuded consciously or unconsciously.

The definition of individual risk attitude as it pertains to this study has been arrived at by consolidating the synthesis of definitions of attitude and risk. For this study*, risk attitude is a mental disposition towards risk which can be said to be responsive to individual human and environmental stimuli in which a decision is being made.*

3.5.2 Individual risk attitude domains

Several scholars have entertained the idea of investigating risk attitudes as aspects of specific domains of life as opposed to being domain general (Blais & Weber, 2006;

Nicholson, Soane, Fenton-O'Creevy & Willman, 2005; Franken, Gibson & Rowland, 1992; Jackson et al., 1972; Keinan & Bereby-Meyer, 2012). Blais and Weber (2006) believe that risk attitude is sensitive to domain-specific patterns, as supported by the reasoning that different situations evoke different risk attitudes. In the organisational context, the aforementioned authors posit that understanding domain-specific patterns in relation to risk attitudes can assist management in managing risk. These domain-specific patterns of risk behaviour offer practical insights into "theoretical modelling of risk behaviour and … the motives underlying individual-level choices about engaging in risky behaviour" (Blais & Weber, 2006: 1).

Some scholars have noted that individuals exhibit varying degrees of risk taking and risk preferences within the same domain (Blais & Weber, 2006; Weber et al., 2002). This pattern is also attributable to demographics such as sex and age. Byrnes, Miller and Schafer (1999), in their meta-analysis of 150 studies comparing male and female risk taking, found that males were more inclined to take risks than females by 6%. Grable (2000) concluded that risk takers were more likely to be younger and single while Hartog, Ferrer-i-Carbonell and Jonker (2000) found that risk taking was correlated to income and education.

Table 3.2 below gives a breakdown of the most common individual risk attitude specific domains found in literature.

TABLE 3.2: Individual risk attitude domains

Source	Article	Domain
Blais and Weber (2006)	A Domain Specific Risk-taking (DOSPERT) scale for adult populations	- Financial - Health/safety - Recreational - Ethical - Social
Nicholson et al. (2005)	Personality and domain-specific risk taking	- Recreation - Health - Career - Finance - Social - Safety

Source	Article	Domain
Franken, Gibson and Rowland (1992)	Sensation seeing and the tendency to view the world as threatening	- Psychological - Physical
Jackson et al. (1972)	A four-dimensional interpretation of risk taking	- Monetary - Physical - Social - Ethical
Keinan and Bereby-Meyer (2012)	"Leaving it to chance" – Passive risk taking in everyday life	- Resources - Medical - Ethical

The next section discusses the irrationality of individual risk attitudes in managerial decision-making.

3.5.3 The irrationality of individual risk attitudes

Irrational behaviour by investors has been reported by several scholars like Kahneman and Tversky (1979); Leinweber (1997); and Hirshleifer et al. (2003), as reported by Mamun, Syeed and Yasmeen (2015). The scholars found "repeated patterns of irrationality, inconsistency, and incompetence in the manner human being[s] arrive at a decision and make choices", especially under conditions of uncertainty, which conditions managers often operate in (Mamun et al., 2015: 1). The authors conclude that the orthodoxia definition of rational decision-making does not hold when analysed in the spheres of "key assumptions like homogeneous expectation, information efficiency" of markets (Mamun et al., 2015: 13).

In support of this conclusion, Bergler (1995) posits that the way individuals face risks, and their risk behaviours are not primarily due to careful rational considerations. Bergler (1995: 1) identifies a number of factors that contribute to the irrationality of risk attitudes: "(i) General paranoiac hysterical fear of risks, (ii) complete repression of health risks, (iii) unsureness and inability in dealing with risks, (iv) prejudice against risks, (v) admiring risk behaviour, (vi) seeking dangerous ways to test one's own limits, (vii) readiness for aggression by not subjectively being able to control the risk, (viii) naively assessing a risk positively thus intensifying pleasurable sensation, (ix) increased preparedness to take risks in groups, (x) increased preparedness to take risk in anonymity, (xi) accepting risks as a creative challenge for achievement motivation, (xii) loss of innovation when avoiding risks". In relation to section 3.3 of this chapter, these factors can all be categorised under cognitive biases that include heuristics, affect, framing, emotions and overconfidence, which then influence one's attitude towards risk.

Murata, Yoshida, Doi and Karwowski (2021) echo Mamun et al. (2015) with regard to cognitive biases and decision-making under uncertainty, pointing out that the related behaviours become more irrational since the information asymmetry becomes greater as uncertainty increases. Such irrationalities are often risk seeking and would normally cause disasters (Murata et al., 2015); they would therefore call for consideration in all governance of organisations. Figure 3.4 illustrates this notion of irrationality and decision-making under uncertainty.

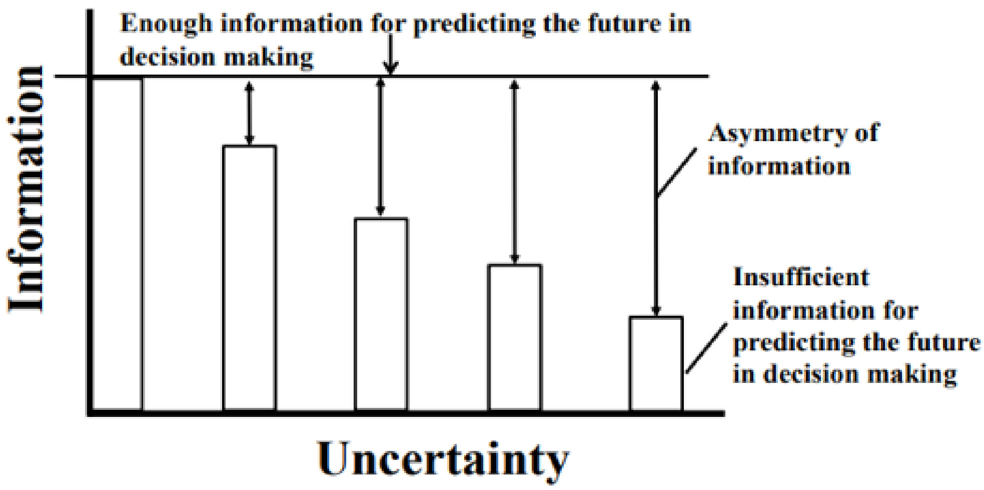

FIGURE 3.4: Schematic summary of relevance of uncertainty to asymmetry of information

Source: Murata et al. (2015: 2)

Bergler (1995) argues that personality, social background, culture and age also play a pivotal role in shaping attitudes and the rationality of choices. He explains that risk attitudes are subjective in terms of the subject that decides, i.e., the individual and the situation or environment. How deep a risk is felt is dependent on the amount of value one attaches to the certain needs and desires that the risk is associated with, which brings the discussion to the Hobbesian, Freudian and Maslow's view of self-interest, desires or needs.

Tversky believes that cognitive biases or illusions are hardwired into people for the purposes of survival (Connelly, 1997). Tversky claims that these biases cause decision-making to be inconsistent with the conventional systematic way of rational choice theory. He postulates that these biases can assist in the understanding of other market anomalies such as the "January effect", "size effect" and "low Price Earnings effect" (Connelly, 1997: 32). Tversky singles out some of the irrational behaviours of managers in relation to these market anomalies, like overreaction to price changes as well as the confident extrapolation of past successes into the future (Connelly, 1997).

It is this study's position that because cognitive biases are hardwired into people and therefore are default, people's choices are to a larger extent laced with self-interests to ensure self-preservation and hence act irrationally selfish when making decisions under risk and uncertainty. Humans do not therefore consider any alternatives if those alternatives are contradictory to their interests and hence their risk attitudes can be said to be unreserved and hence unboundedly irrational.

The ensuing section discusses the psycho-economic insights gathered from the literature reviewed in Chapter 2 and the current chapter, Chapter 3.

3.6 DISCUSSION: PSYCHO-ECONOMIC INSIGHTS INTO CORPORATE GOVERNANCE AND DECISION-MAKING

Following the discussions in Chapter 2 on corporate governance and this chapter, Chapter 3, on decision-making under risk and uncertainty, the study deduced the below psycho-economic views in an endevour to better understand the phenomenon under study. The main problem corporate governance seeks to address is the opportunistic behaviour of man; however, it models humans as rational, which in itself is a fallacy as was established earlier in this chapter. A psycho-economic analysis of decision-making as it pertains to the rationality of agents offers a valuable window into the effective governance of organisations. Gabriel and Carr (2002: 354) argue that psychological variables offer insights that are "original, have extensive explanatory powers and can find ample practical implementations". The authors further suggest that a wide array of organisational phenomena, including leadership, creativity and destructiveness, can be approached in this manner.

Below is a discussion on the theory-based psycho-economic insights on corporate governance as they pertain to decision-making and ultimately firm performance.

i. People drive corporate governance and not the other way around

This research posits that it is a misconception that corporate governance mechanisms drive people to perform optimally, thereby ensuring good firm performance. Corporate governance mechanisms are just that, mechanisms; without people to drive them, they remain just that, on paper, and lack organisational relevance and hence implementation. Despite the numerous revisions by different jurisdictions, ongoing scandals associated with management and directors point at irrational decision-making.

Deloitte's (2016) white paper called, "Good governance driving corporate performance?" outlined a number of dilemmas faced by organisations which require decisions on whether to let go, seek confrontation or apply expert solutions. The graph below illustrates some of the dilemmas.

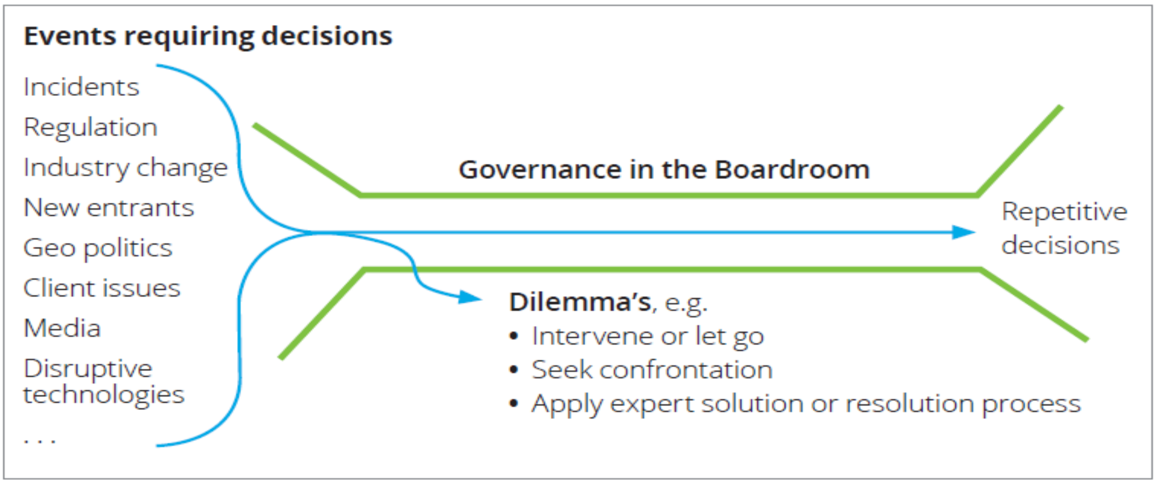

FIGURE 3.5: Events requiring quality decision-making

Source: Deloitte (2016)

There is often a claim that many decisions by the board are regulated, repetitive or done in accordance with a standard/procedure (Deloitte, 2016). There is, however, a general consensus that the decisions that drive performance are the ones that are not repetitive and are associated with risk and uncertainty, as shown in Figure 3.5. Corporate governance, according to the figure, can only drive repetitive and uncomplicated decision-making.

ii. Attitudes to risk taking are in all material respects influenced by individual motivation and therefore dictate human behaviour

Individual desires and motivations are “at play in virtually all human endeavours and learning” (Gabriel & Carr, 2002: 349). Human behaviour observed in organisations is therefore determined by the attitude one takes to one’s own life. These attitudes are influenced by different motivational factors and it is the conflict of desires that has the most impact on self-governance, hence corporate governance. Self-interest or self-preservation has the ability to cultivate or stifle morality. Self-interest can blind one to the most honourable intents of governance mechanisms because of the risk attitudes born of this self-interest.

iii. The associations of the actors in the risk attitude network are not predetermined but rather subject to translation, hence risk attitudes are active and dynamic, affecting the state of corporate governance at each given time

Dynamic, according to the Merriam-Webster dictionary, means continuous and productive activity or change. Individual risk attitudes are made up of different elements, which in this study employing the actor-network theory are called actors (Latour, 2005). The different elements or actors shaping attitudes (risk) are dynamic and ever changing, with some being displaced as they are repressed while others manifest in consciousness. In this regard, individual risk attitudes are made up of translation chains whose actors change, displace and translate, ultimately shaping a certain behaviour or decision that is taken.

Such views extend insight into behavioural theories by exploring the psychological dimensions of corporate governance, highlighting the importance of emotions, experiences, feelings, desires and ultimately risk attitudes in organisational life.

iv. Compliance to corporate governance mechanisms is centred around the outcome of a constant internal psychological conflict which is due to competing interests

From the review of literature on different theories on human motivation – Hobbesian, Freudian and Maslow’s – interests, desires or needs are always in conflict in respect of hierarchical importance. This internal conflict shapes attitudes and behaviour. Freud (1910) postulates that the ego’s main duty is to balance the desires of the aggressive pleasure-seeking id with the moral control of the super-ego. An ongoing conflict between desires, morality and social expectations leads to certain attitudes and behaviours being adopted. Different attitudes therefore dictate how corporate governance will be received or otherwise complied with. If someone has an overpowering self-interest, that person is likely to follow it selfishly and irrationally, no matter what governance mechanisms have been introduced.

v. Significant individual irrationality in decision-making impacts corporate governance and hence firm performance

A consensus exists amongst researchers that meta-psychological links are made between irrationality and decision-making which then impact organisational decision-making (Davidson, 1982; Gardner, 1993; Stein, 2003). Literature agrees that individuals tend to act automatically and based on attitudes due to cognitive biases that then drive choices, hence behaviour. These cognitive biases always err on the side of self-preservation in such circumstances and hence irrational thinking will become the safety valve.

vi. Power is distributed evenly amongst the human and non-human actors: the ANT concept of symmetry

The ANT concept of symmetry suggests that actors in a network have equal recognition, whether human or non-human (Cresswell et al., 2010; Latour, 1996). In this regard, human influencers such as society, family and colleagues have equal footing with non-human influencers such as situations and environments. Employing this concept implies that no one influencer is considered in isolation when attitudes are being formed. When faced with management decisions, managers are influenced by both human and situational/environmental factors that then form attitudes.

3.7 SUMMARY

In this chapter, the two research questions highlighted at the beginning of the chapter were addressed. The chapter explained the evolution of the theory of decision-making, from Adam Smith's perfect rationality to Herbert A. Simon's bounded rationality to the recent concept of unbounded irrationality. Unbounded irrationality was linked to the formation of individual risk attitudes, thus the manifestation of behaviour. The conclusion was that people were always guided by self-interest and cognitive biases in making choices and therefore always acted irrationally under conditions of risk and uncertainty. The chapter concluded with psycho-economic insights into corporate governance.

4 CHAPTER 4: DEVELOPMENT OF A RISK ATTITUDE MEDIATED CORPORATE GOVERNANCE–FIRM PERFORMANCE THEORETICAL FRAMEWORK

4.1 INTRODUCTION

The aim of this chapter is to develop a risk attitude mediated corporate governance–firm performance framework as informed by the literature explored in the previous two chapters. As highlighted in the previous chapter, this study positions individual motivation i.e., self-interest and cognitive biases in the form "individual risk attitude" as the psychological variable that intervenes in the relationship between corporate governance and firm performance. This chapter therefore commences by exploring the possibility of individual risk attitude mediation in various relationships, also referred to as risk preferences by some scholars in behavioural sciences. The chapter also incorporates the underlying assumptions of the actor-network theory (ANT) in conceptualising individual risk attitudes. The chapter concludes by proposing a theoretically based framework for corporate governance and firm performance with individual risk attitude as a mediator.

The previous chapters concluded the following based on the literature review:

i. A consensus exists amongst researchers that corporate governance does, in one form or the other, influence firm performance.
ii. Literature is fragmented in as far as the relationship between corporate governance and firm performance is concerned.
iii. Even with institutionalised advancement in corporate governance practices, agency problems persist, eroding corporate value.
iv. The models and frameworks employed in research studies on the relationship between corporate governance and firm performance are too simplistic in that they assume a direct causal relationship between the two variables, disregarding the effects of possible intervening variables.
v. Other incidental aspects such as the psychology of the human self, particularly the effects of human rationality or irrationality as the case may be, are altogether ignored in most prior studies.
vi. Against the conventional wisdom of current codes of corporate governance of monitoring and sanctioning management, modern-day scholars have

suggested augmenting existing governance practices with psychological aspects such as self-governance.

vii. Inasmuch as agency theory explains the findings of some studies, some aspects of corporate governance – such as the hard to measure aspects of corporate governance – are not explained by agency theory and its prescriptions.

viii. Agency theory exhibits narrowness in its behavioural assumptions, focusing on the financial self-interest behaviour of humans and disregarding other human motives.

ix. Agency theory models rational individuals who are bent on furthering their own interests, however striving to maximise their usefulness to their principals. This study argues that individuals are not always rational, translating to most behaviours and actions being triggered by self-interest that is unboundedly irrational as exhibited in the individual risk attitude.

x. Unboundedly irrational motivation and thus self-interest has the potential to alter even the most ethical and moral of humans, influencing their decision-making.

The research question to be answered in this chapter is:

TQ 4: How may corporate governance practices best be integrated with individual risk attitudes in decision-making in developing a conceptual framework for the corporate governance–firm performance relationship as informed by literature?

4.2 CORPORATE GOVERNANCE AND FIRM PERFORMANCE: INDIVIDUAL RISK ATTITUDE AS A MEDIATOR

This study models the relationship between corporate governance and firm performance, taking into consideration the extent to which the relationship is mediated by individual risk attitude. It should be noted that the risk attitude of managers plays a crucial role in decision-making that in turn determines the continued and sustained profitability of any organisation.

4.2.1 The possibility of mediating variables in causal relationships

Mediation theory is a methodology for understanding causal relationships (Musairah, 2015). The methodology of mediating analysis is used across disciplines, including the social sciences. A salient reason for testing mediation is that of endeavouring to understand the mechanism through which the causal relationship between a dependent variable and an independent variable exists. Holistic effects tend to be captured through this analysis.

Namazi and Namazi (2016), in their research on the “Conceptual analysis of moderator and mediator variables in business research”, conclude that business models are incomplete and fall short of explaining the underlying complex business problems when moderating and mediating variables are not considered. Aguinis, Edwards and Bradley (2016) clarify the difference between the two terms, explaining that moderation is the magnitude of the effect of an antecedent on an outcome while mediation is the ability of an intervening variable to transmit the effect of an antecedent variable on an outcome. A mediating variable can also be called a surrogate effect, intervening effect, indirect effect or intermediate effect (MacKinnon, Lockwood, Lockwood, West & Sheets, 2002). Namazi and Namazi (2016: 540) postulate that the inclusion of mediating variables is increasingly widening the scope of existing theories by explaining “when”, “how” and “why” a particular relationship is present in regard to independent and dependent variables.

Individual risk attitude is the variable to be studied as the mediating factor. According to Wu and Zumbo (2008: 373), a mediating variable “should be a responsive variable that changes within a person” or in an organisational context, an organisation. A misconception among scholars is that if a variable is disconfirmed as a mediating variable, it is then tested for moderation. Wu and Zumbo (2008) refute this notion and instead claim that the same variable should not be tested for both mediating and moderating effects. They explain that the appropriate and relevant role should be determined from the onset as advised by the researcher’s substantive theory.

4.2.2 Scholarly articles on risk attitude as a mediator in decision-making

Below is a synthesis of five scholarly articles on the mediation effects of risk attitudes or risk perception or risk preference, as referred to by some articles, in different areas of decision-making. The five articles agree that risk attitude/risk perception is significant in decision-making and play an intervening role. The articles also confirm the relationship between risk attitudes and cognitive biases which have been established to be the basis of irrational behaviour, as reflected in the literature review of Chapter 3.

Mediating role of risk perception in the relationship between financial literacy and investment decisions (Waheed et al., 2020)

Waheed, Ahmed, Saleem, Din and Ahmed (2020) evaluated financial literacy and knowledge of investors in the Pakistan stock market. The research purpose was to establish whether risk perception mediated the relationship between investors' investment choices and their financial literacy. The survey involved 287 individuals and an adapted survey instrument with self-reported variables on a five-point Likert scale. Figure 4.1 is the conceptual framework for the mediation of risk perception.

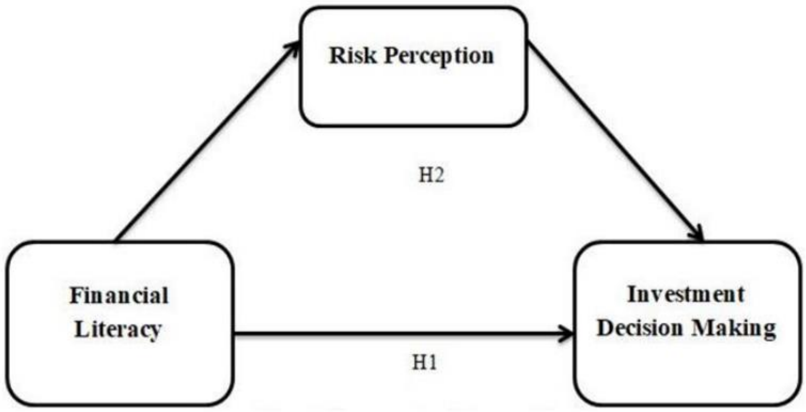

FIGURE 4.1: Conceptual framework

Source: Waheed et al. (2020: 119)

In the framework, the independent variable is financial literacy, which influences the dependent variable, investment decision-making, through the mediating variable of risk perception. The scholars found that risk perception fully mediated the relationship between financial literacy and investment decisions. However, demographics such as gender and age influenced the mediation power.

Mediating role of risk perception between behavioural biases and investors' investment decisions (Ahmed et al., 2022)

Ahmed, Rasool, Saleem, Khan and Kanwal (2022) examined the mediating role of risk perception in the interactions between behavioural biases and investors' choices. The study was conducted in Pakistan using 450 purposively selected individuals investing on the Pakistan Stock Exchange. The methodology for data collection was thorough self-report questionnaires. Below is the conceptual framework for the study.

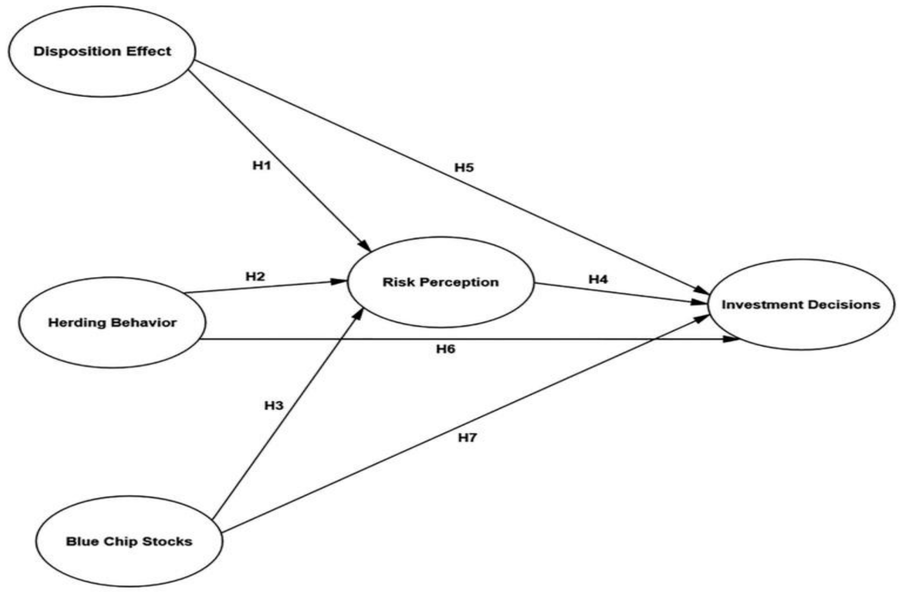

FIGURE 4.2: Conceptual framework

Source: Ahmed et al. (2022: 7)

The scholars concluded that risk perception did mediate the relationship between blue-chip stocks and investment choices due to investors' preference for the specific stocks. However, risk perception did not mediate the relationship between some behavioural biases, i.e., herding bias and disposition effect, and investment decisions, due to the different psychological dispositions of individuals.

Mediating role of optimism bias and risk perception between emotional intelligence and decision-making: a serial mediation model (Chen et al., 2022)

Chen, Ishfaq, Ashraf, Sarfaraz and Wang (2022) posit that average people often make irrational decisions due to judgement errors or cognitive biases. Their study investigated the relationship between emotional intelligence and decision-making with optimism bias and risk perception as mediating variables. Data was collected from 370 conveniently sampled investors using a self-report questionnaire and analysed in SPSS version 26 and PROCESS Macro model 6 with AMOS employed in validation and model-fit analysis. Figure 4.3 is the conceptual framework.

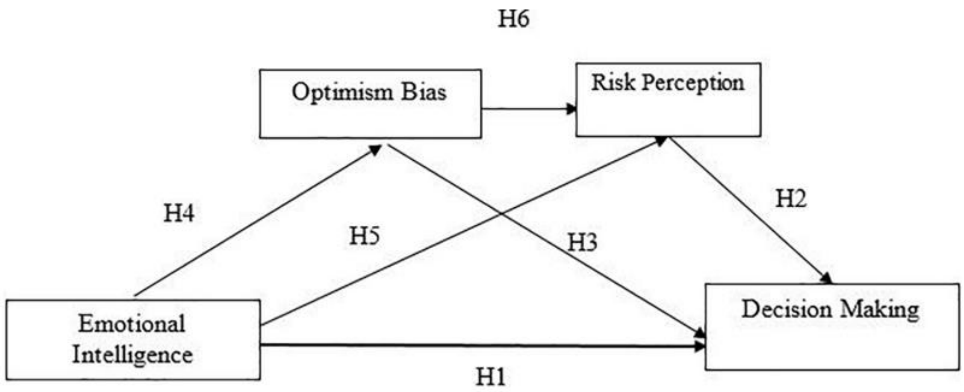

FIGURE 4.3: Conceptual framework

Source: Chen et al. (2022: 4)

The study found that emotional intelligence had a significant effect on decision-making, in line with previous literature, and confirmed that there was serial mediation of optimism bias and risk reception in the relationship. This can be interpreted to mean that behavioural biases, in this case optimism bias, have an effect on decision-making through risk perception.

Heuristic biases as mental shortcuts to investment decision-making: A mediation analysis of risk perception (Jain et al., 2023)

Jain et. al., (2023) explored the relationship between heuristic biases and investors' decision-making with risk perception as a mediator. The data was collected from a survey of 432 equity investors on the Indian National Stock Exchange (NSE). Figure 4.4 is the structural equation model for the study.

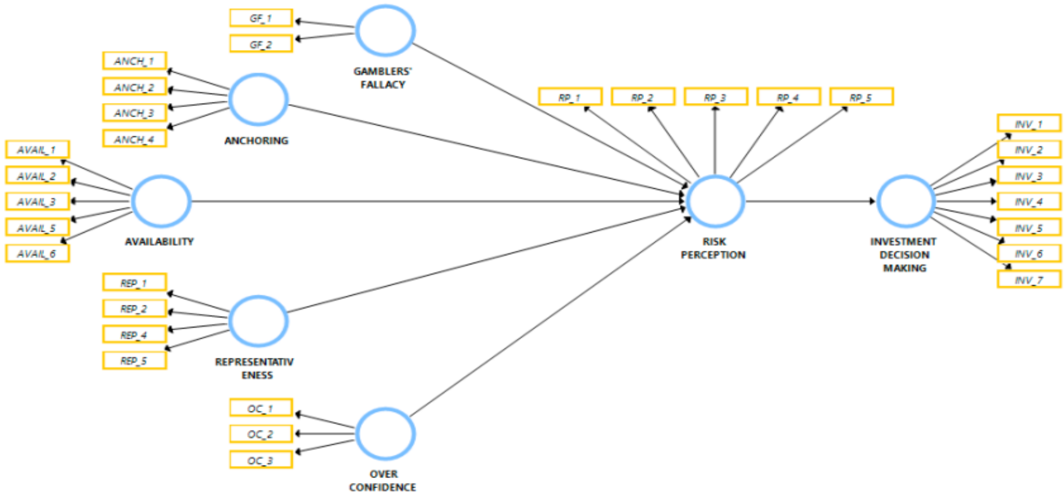

FIGURE 4.4: PLS-SEM model

Source: Jain et al. (2023: 6)

The study concluded that risk perception played a mediating role in the relationship between decision-making and most of the studied biases, i.e., overconfidence, availability, gamblers' fallacy and anchoring biases, albeit partially. It however fully mediated representativeness bias and decision-making. The interpretation from the study is that behavioural biases do influence risk perception which then impacts investment decision-making.

Relationship between psychological factors and investment decision-making: The mediating role of risk perception (Riaz & Hunjra, 2015)

Riaz and Hunjra (2015) studied the effect of different psychological factors on investment decision-making in Pakistan, specifically risk propensity, information asymmetry and problem framing, through risk perception mediation. The study also looked at the weighting attached to each independent variable by investors when making investment decisions. The data was collected through a survey employing a self-report adapted questionnaire and analysed through structural equation modelling. Figure 4.5 is the theoretical framework showing the hypotheses for the study.

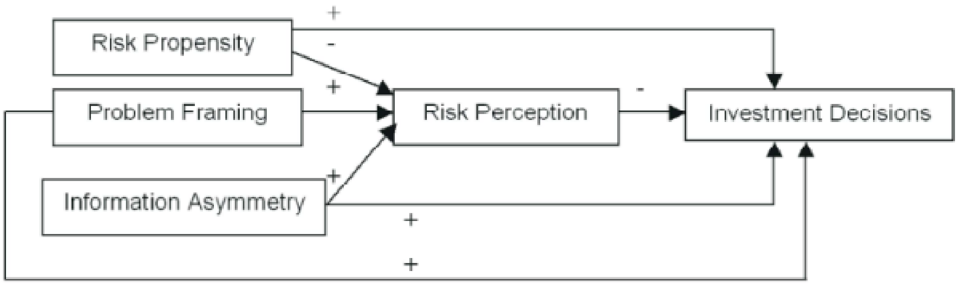

FIGURE 4.5: Research model

Source: Riaz & Hunjra (2015: 973)

The study found that risk perception did partially mediate, positively, the relationship between risk propensity and decision-making. Risk perception did fully mediate, negatively, the relationship between problem framing and decision-making. As for information asymmetry, the study showed that the relationship with decision-making was also mediated by risk perception.

To commence the construction of the framework, there is the recognition that “we think by not concentrating on anything in particular, moving from one idea to the next in an endless chain of associations” (Sigmund Freud quoted by Ford, 2017: 1560). It is against this background that the research explores the actor-network theory in the conceptualisation of individual risk attitudes.

4.3 ACTOR-NETWORK THEORY AND INDIVIDUAL RISK ATTITUDE

The actor-network theory (ANT) is a socio-philosophical approach that implores scholars to consider resultant associations of interacting and unstable networks (Atkinson, 2019; Latour, 2005). In support of this assertion, Czarniawska (2017) has also posited that the actor-network theory is not a theory, but an approach. ANT is trans-disciplinary, however, having evolved from science and technology. This assertion is evidenced by the originator of the theory, Latour, calling himself a philosopher, a sociologist, an anthropologist as well as a science and technology scholar. The network theory has evolved since the 1950s with the actor-network theory (ANT) being introduced in the late 1970s in a bid to address the phenomenon of scientific activity in Latour and Woolgar’s laboratory life originally called “The social construction of scientific facts" (Bencherki, 2017; Lezaun, 2017). Bruno Latour, the originator of the ANT, was singled out by the Times Higher Education Supplement in 2007 as one of the ten most cited authors in humanities, living or dead.

The overarching idea in ANT is the theorisation on how networks are formed, what associations exist and how these networks move, enrolling new actors and forming new networks which can achieve temporary stability or in other circumstances, instability (Mclean & Hassard, 2004). ANT's epistemological and ontological positions are those of viewing the world as a hub of networks, which can be humans, ideas, concepts or non-human "actors" (Cresswell, Worth & Sheikh, 2010). An actor, according to Latour (1996: 373), "can literally be anything provided it is granted to be the source of action". The list of what can be considered an "actor" in ANT is endless and open ended. It can be "human beings, machines, animals, nature, ideas, organizations, inequalities, scale and sizes" (Law, 2009: 141). To comprehend networks requires the studying of associations between the actors in a network (Latour, 2005), in this case the individual manager's specific antecedents of risk-taking together with a competent understanding of the role of the human psyche in building attitudes.

The main building blocks of the ANT theory or approach are:

i. The concept of translation
ii. The symmetrical treatment of human and non-human actors.

Translation is a concept that posits that moving something from one place to the other does not change it only, but also what has caused the move – or in ANT language, the translator is also changed. The symmetrical treatment of actors assumes equal impact of all the actors in a network, whether human or non-human. Bencherki (2017) explains that actor-network concepts posit that for one actor to act, many others should act as well. An action is therefore shared; thus, the actor-network theory is not a theory of actors **in** a network but rather a theory of actors **as** a network. Networks are constantly evolving due to the complexity and fluidity of social reality. ANT therefore conceptualises different realities and experiences emanating from these various actors and takes into consideration their interrelations or associations (Cresswell, Worth & Sheikh, 2010).

Table 4.1 sets out the functional definitions of key ANT concepts as they pertain to this study.

TABLE 4.1: Definitions of key concepts of the ANT theory

Concept	Definition
Actor	An actor "can literally be anything provided it is granted to be the source of action" (Latour,1996: 373). It can be "human beings, machines, animals, nature, ideas, organizations, inequalities, scale and sizes" (Law, 2009: 141).
Actor network	The association of heterogeneous elements through an action (Latour, 2005).
Translation	Translation refers to "all the displacements among other actors whose mediation is essential to the occurrence of any action. Instead of a rigid opposition between context and content, the translation chains refer to the work by which actors change, displace and translate their several and contradictory interests" (Latour, 2001: 356). It may also be triggered by "encounters of actors enrolled in different actor networks" (Laasch, 2018: 6).
Symmetry	Symmetry is a concept that entails equal existence of human and non-human elements in a network and no element exists outside this network (Latour, 1996).

The actor-network theory explains the plethora of heterogeneous elements. According to Latour (2005: 27), for ANT there is "no group, only group formation". Actor-network theory therefore acknowledges the collective character of an action. Accordingly, as individual risk attitude is a factor of a combination of personal, environmental, situational and special aspects of the decision to be made, it needs to be analysed considering the balance experienced in this network of association.

This study borrowed insights from the ANT theory in its bid to explain the different domains of individual risk attitudes as they pertain to decision-making. Risk attitudes are not fragmented or silo-domains but rather a collective attitude though semi-autonomous.

4.4 VARIABLES TO BE CONSIDERED IN THE RESEARCH

The variables considered for the preliminary conceptual framework were consolidated from a wide array of literature as presented in the previous two chapters. Three latent variables were identified in this study: corporate governance, individual risk attitude and firm performance. Table 4.2 details the measured variables related to the three latent variables studied. These inform the preliminary construction of the theoretical framework for corporate governance–firm performance.

TABLE 4.2: Variables of the study

Latent variables	Measured variables	Sources
Corporate governance	**Corporate governance principles**	*King IV (2016).*
Firm performance	**Return on assets**	*Zabri, Ahmad and Wah (2016); Rashid (2018); Azeez (2015); Buallay, Hamdan and Zureigat (2017); Aktan et al. (2018).*
	Asset growth	*Zabri, Ahmad and Wah (2016); Rashid (2018); Azeez (2015); Buallay, Hamdan and Zureigat (2017); Aktan et al. (2018).*
	Profit margin	*Spanos and Lioukas (2001).*
Individual risk attitude	*R1-R…. **Social, physical, ethical, health, financial, business, psychological, recreational, career**	*Keinan and Bereby-Meyer (2012); Blais and Weber (2006); Nicholson et al. (2005; Jackson et al. (1972); Franken, Gibson and Rowland (1992).*
Control variables	**Firm size**	*Arora and Sharma (2016); Akbar et al., 2016; Azeez (2015); Aktan et al., (2018); Buallay, Hamdan and Zureigat (2017).*
	Firm age	*Azeez (2015); Arora and Sharma (2016); Buallay, Hamdan and Zureigat (2017).*

***Variables employed will be informed by the outcome of the first qualitative enquiry with subject matter experts**

i. **Corporate governance** – Corporate governance is measured employing selected practice recommendations from the King IV Code of Corporate Governance. These are discussed further in Chapter 6.

ii. **Firm performance** – Firm performance is measured using the ROA, asset growth and profit margin. According to the International accounting standards

(IAS), return on assets (ROA) is a financial ratio that shows the percentage of earnings to the total assets of a company while asset growth is the exponential increase in the asset base as shown on the statement of financial position. Net profit margin is the resultant profit as a percentage of revenue. The instrument is discussed in Chapter 6.

iii. **Individual risk attitude** – Individual risk attitude measures are based on the risk attitude domains discussed with the subject matter experts as identified in the first qualitative enquiry of the study.

iv. **Control variables –** The suggested preliminary framework takes cognisance of some firm specific characteristics that may obscure the true causal relationship between the two variables being studied. Firm size and firm age are therefore the control variables.

Firm size

Firm size has been employed in many studies investigating the relationship between corporate governance and firm performance as a control variable (Arora & Sharma, 2016; Akbar et al., 2016; Azeez, 2015; Aktan et al., 2018; Buallay, Hamdan & Zureigat, 2017). Firm size is expected to have an influence on corporate governance mechanisms due to scale differences in the costs of compliance, operations, market regulations and agency problems (Akbar, 2016). Firm size is calculated as the natural logarithm of total employees.

Firm age

For this study, firm age is the number of years a company has been incorporated. Recently incorporated companies may experience inefficiencies resulting in poor firm performance due to the fact that they may be still in the process of building efficient systems, unlike older firms. Other studies on corporate governance that have used firm age as a control variable include those of Aeez (2015), Arora and Sharma (2016) and Buallay, Hamdan and Zureigat (2017). Firm age is measured as a natural logarithm of years incorporated.

4.5 PRELIMINARY CONCEPTUAL FRAMEWORK FOR CORPORATE GOVERNANCE–FIRM PERFORMANCE

The current section explains the construction of a preliminary conceptual framework for the corporate governance–firm performance relationship based on the literature, employing the variables discussed in the previous section. The study takes the pragmatic view that the world is a web of networks, and that reality is subjective.

It is imperative to note that conceptualisation of the phenomenon has been done as a framework and not as a model so as to allow for further adaptation as more evidence-based understanding is gained through empirically supported findings. A framework was also chosen for the modelling of this phenomenon to allow for adaptation to different environments and jurisdictions, not necessarily sampled in this study. The framework attempts to explore the possibility that for organisations to attain sustained firm performance through the application of corporate governance practices, there is a need to understand the role of individual risk attitude, which in this study has been seen to be a function of unboundedly irrational self-interest or motivation.

The following concepts, principles and/or ideologies were employed in the construction of the preliminary framework:

i. Motivational theories as the theoretical container for individual risk attitude cum behaviour within the spheres of unbounded irrationality in organisational decision-making by individual managers.
ii. The ANT theory's concepts of translation and symmetry, explaining the perceived association and interaction of the various individual risk attitude domains relevant to the study.
iii. Hayes' (2013) mediation model. This will be discussed as part of the research methodology in Chapter 5.

Figure 4.6 depicts the proposed conceptual framework developed from the existing literature tested in this study.

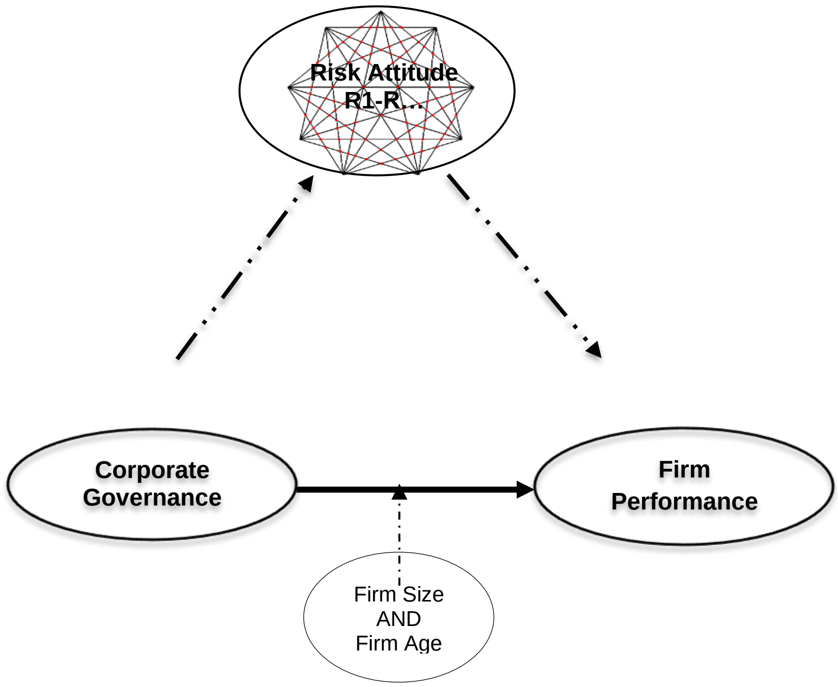

FIGURE 4.6: Proposed conceptual framework for corporate governance–firm performance relationship

The proposed framework illustrates the relationship between corporate governance and firm performance with individual risk attitude as a mediating factor while controlling for the effects of firm size and age. Individual risk attitude has been modelled from the actor-network ideologies which propose that all of the actors in a network are interconnected (Bencherki, 2017). This then means that the variable "individual risk attitude" as the actant, though seemingly unitary, is always a function of the heterogenous others, i.e., the measured variables that make it up, as shown as R1 to R….These determinants are interconnected, similar to a network such that when one acts, then all the others proceed to act, and a decision is made recognising the attainment of some balance amongst these variables. Individual risk attitude in this framework takes cognisance of both human and non-human actors, i.e., individual and situational actors in which the decision is being made, as will be represented by various risk domains as guided by subject matter experts.

The independent variable is corporate governance. The dependent variable is firm performance, which is measured by three financial measures, ROA, asset growth and profit margin. In this framework, the independent variable, corporate governance, predicts the dependent variable, firm performance. The independent variable also predicts the mediator individual risk attitude. The combined strength of the independent variable and the mediator predicts the dependent variable. However, the strengths of the prediction are not shown in this preliminary conceptual framework. The framework attempts to capture the manifestation of individual risk attitude from the mind, i.e., as influenced by cognitive biases based on self-interest and self-preservation through the combined influence of human and non-human (situational) predictors of individual risk attitude.

In the context of this framework an intervention to change corporate governance value through individual risk attitude mediation will lead to a change in value or the probability distribution of firm performance. The role of individual risk attitude as a mediating variable with respect to corporate governance is that it acts as a dependent variable while in relation to firm performance it acts as an independent variable. The causal arrows therefore show flows of relationships and not particularly the spatio-temporal features or the density of the mediation or intervention. According to Woodward (2003), interventions need not be feasible but rather conceivable.

By introducing a mediating variable into this framework, it means either corporate governance (independent variable) no longer affects firm performance (dependent variable), which is called complete mediation, or at least the causal effect is weakened, called partial mediation. This will answer the questions – how and why firm performance is dependent on corporate governance.

It should however be noted that this framework is preliminary and hence further adaptation is expected based on the empirical investigation findings from in-depth interviews with subject matter experts and a subsequent quantitative survey with a sample of management employees.

4.6 SUMMARY

In this chapter, the research question given at the beginning of the chapter was addressed. The chapter presented the proposed preliminary framework based on the concepts and relationships reflected in the literature reviewed in this chapter and the previous two chapters. The chapter commenced by exploring the possibility of intervening variables in causal relationships. The variables to be considered in the study were discussed. Actor-network theory was employed in further conceptualising the phenomenon. The next chapter discusses the methodology for the study.

5 CHAPTER 5: RESEARCH METHODOLOGY

5.1 INTRODUCTION

In this chapter, the research methodology employed in the construction of the framework of the risk attitude mediated corporate governance–firm performance relationship is discussed. Research methodology as defined by Leedy and Ormrod (2014) is the general approach taken in conducting a research project and encompasses the particular enquiry tools selected by the researcher. This chapter therefore sets out the step-by-step approach chosen for the study. The research design, which took the form of a two-part sequential exploratory mixed method, target population and related sampling methods are explained in relation to the qualitative and quantitative empirical enquiry. The validity, reliability and trustworthiness of the data obtained from these two enquiries are also discussed. The chapter addresses the ethical considerations that pertain to qualitative and quantitative enquiries with reference to this study. A summary of the research process concludes the chapter.

The empirical research questions to be addressed by the two-part data enquiry methodology discussed in this chapter are: -

EQ 1: How is unbounded irrationality, as it pertains to the formation of individual risk attitudes in decision-making, understood and best described by subject matter experts?

EQ 2: What are the most relevant individual risk attitude domains relevant to managerial employees as deduced from subject matter experts' insights?

EQ 3: How may a framework for the corporate governance–firm performance relationship best be conceptualised according to subject matter experts?

EQ 4: What are the individual risk attitude domains relevant to managerial employees as informed by a quantitative enquiry?

EQ 5: To what extent is the corporate governance-firm performance relationship mediated by the individual risk attitudes of those charged with managing corporates?

EQ 6: How may a framework for the corporate governance–firm performance relationship which integrates individual risk attitudes best be described?

5.2 RESEARCH METHODOLOGY

According to Crotty (1998: 3), research methodology "is the strategy or plan of action which lies behind the choice and use of particular methods". As such, methodology is the why, what, where, when and how data are collected and subsequently analysed (Scotland, 2012). Saunders, Lewis and Thornhill's research onion developed in 2007 served as a guide for this study's research methodology choices. The research onion depicts the underlying issues governing the research methodology choices, from the philosophical assumptions to the data collection and analysis techniques (Saunders et al., 2019). The research onion is shown in Figure 5.1 and followed by a table outlining the research methodology choices of this particular study.

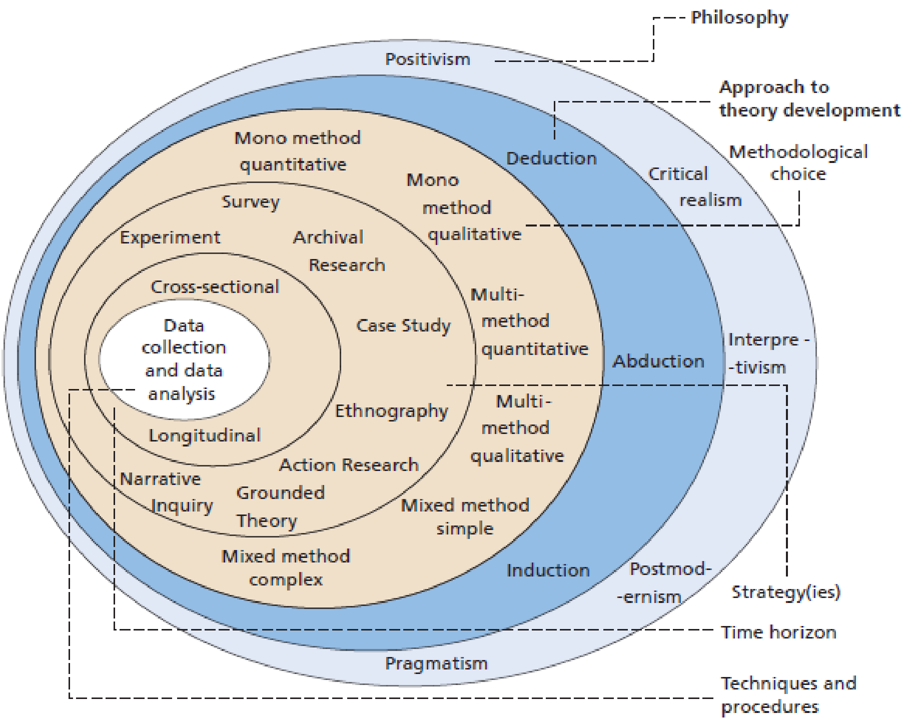

FIGURE 5.1: **The research onion**

Source: Saunders et al. (2019: 130)

Table 5.1 shows the research methodology choices for this particular study as guided by the research onion in Figure 5.1.

TABLE 5.1: Research methodology choices

Research Onion component	Research methodology choices
Philosophy	Pragmatism

Research Onion component	Research methodology choices
Research approach	Abductive (combination of deductive and inductive)
Methodological choice (and research design)	Exploratory sequential mixed method
Strategies	Interviews and surveys
Time horizon	Cross-sectional
Techniques and procedures	Semi-structured in-depth interview and closed-ended survey with thematic content analysis and mediation statistical analysis respectively

Ensuing is a detailed discussion of the research methodology as guided by Saunders' et al. (2019) research onion.

5.3 PHILOSOPHICAL ASSUMPTIONS OF THE STUDY

Creswell (2014) explains that philosophical ideas need to be integrated with broad research strategies and specific methods for implementation. The ontological, epistemological and axiological positions on the nature of reality and knowledge of a particular study influence the selection of appropriate research methods to be employed in the study. According to Hall (2013), the most widely accepted worldviews are post-positivism, constructivism, transformative and pragmatism. Of these, post-positivism has been linked to quantitative methods and constructivism to qualitative methods. As this study sought to come up with a well-informed potential solution to the research problem discussed herein, taking into consideration actions, situations and consequences rather than antecedent conditions, a middle ground paradigm needed to serve as the theoretical basis for the study. As supported by Hall (2013), pragmatism is thus seen to be suited for this multiple data enquiry. A pragmatism paradigm allows for multiple realities and hence truth will become what holds true at that time and is subjective.

5.3.1 Ontological assumptions of the study

Crotty (1998) defines ontology as the study of being, while Scotland (2012: 10) augments this definition by positing that ontological assumptions "are concerned with what constitutes reality, in other words 'what is'". The ontological position in a research study is therefore the nature of reality, what the researcher believes to be true. Metapsychology is derived mostly from the personal, subjective worlds of its creators. Theories of human motivation, i.e., Hobbesian, Freudian and Maslow, are all rooted in subjectivity. This study, like these philosophers, views "**subjectivity**" as the default ontology of this study.

The Encyclopedia of Psychology and Religion (2014) defines subjectivity as "the perception or experience of reality from within one's own perspective, both conscious and unconscious and necessarily limited by the boundary or horizon of one's own worldview". Subjectivity brings forth epistemological principles that allow for the investigation of the phenomenon in the subjective contexts it finds itself in, i.e., of individual risk attitudes. It then follows that behaviour is a product of a specific subjectivity context. According to Buchanan et al. (1998: 338), "a subjective description of reality is someone's account of his own perception of that reality". This then means that a person is confined to what reality is to him or her. In simple terms, all reality is subjective. This view, however, stands in contradiction to the metaphysical premise based on the seventeenth century Western scientific view which states that there is one reality, and this one reality is shared by all (Buchanan et al.,1998).

Risk and uncertainty are mostly analysed along the lines of a subjective-objective dimension (Stanford encyclopaedia, 2007). The encyclopaedia explains that risk is more objective while uncertainty is related to subjectivity. For a clear understanding of the philosophical dimensions of subjectivity-objectivity, a distinction between risk and uncertainty is required. The objectivity-subjectivity philosophical rule is that subjectivity relates to elements that reside inside the mind while objectivity is related to elements that are outside the mind, i.e., independent of the mind, and can therefore be shared with other people. In behavioural sciences, actions emanating from risk attitudes are actions rooted in uncertainty; one is uncertain of the consequences, as probabilities are rarely known completely. In psychology, subjective risk is taken as an individual's own assessment of the possibility of real danger (Stanford encyclopaedia, 2007). The aforementioned assessments of subjective risk are called risk perceptions and Sjoberg (2004) proposes that these be studied within attitudinal and psychological measurements, which is what this study has done.

Individuals have different perceptions and interpretations of a single reality and therefore accept subjectivity as a key component of social life. Participants were thus requested to self-report their risk attitudes.

5.3.2 Epistemological assumptions of the study

Epistemological assumptions are concerned with "how the researcher knows about the reality and assumptions about how knowledge should be acquired and accepted" (Pathirage et al., 2008: 5). In simpler terms it is how one knows about what one knows (Creswell, 2014). The most common epistemological paradigms are (i) positivism, (ii) post-positivism, (iii) critical theory/inquiry, (iv) constructivism, (v) participatory, (vi) postmodernism, (vii) feminism and (viii) interpretivism (Lincoln, Lynham & Guba, 2011; Kemmis & Wilkinson, 1998; Crotty, 1998).

The two distinct competing schools of thought on epistemological assumptions are positivism and social constructionism or constructivism, often combined with interpretivism. In positivism, the observer is independent, and explanations must demonstrate causality with the research approach being deductive and drawn from a hypothesis or theory. This is most applicable to quantitative research. On the other hand, social constructionism involves gaining a deeper understanding of a phenomenon from a wider range of participant meanings and therefore mostly employs qualitative research methods with mostly open-ended questions.

Based on the definition of risk by the Stanford Encyclopaedia of Philosophy (2023) as "an unwanted event which may or may not occur", the encyclopaedia further explains that "knowledge about risk is knowledge about lack of knowledge", hence uncertain. Dewey (1931; 1938) claims that experience is central to an investigation of reality that helps resolve uncertainty. Freud believed that individual psychology was a science of nature, *naturwissensschaften*, and not a science of the mind, g*eisteswissenschaften* (Winograd & Davidovich, 2014). According to Mezan (2007), to bridge the ontological difference between these two sciences of nature and the mind, diverse methods are required to study the phenomenon of human rationality in decision-making under risk and uncertainty.

Pragmatism, an epistemological position that takes into account the variedness of methods of enquiry, was accepted as the default paradigm for this study. Creswell

(2014) explains that pragmatism is based on actions, situations and consequences, unlike post-positivism which arises from antecedents.

Pragmatism accepts plurality of methods in knowledge enquiry. Under the pragmatist perspective, researchers should employ methods of enquiry that are most suitable for their particular research problem (Tahakkori & Teddlie, 1998). Here, the focus is on the consequences of the research rather than the methods. Pragmatism's roots can be traced to early philosophers such as Charles Sanders Pierce, William James (psychologist) and Chauncy Wright, among others, in the early 1870s. The pragmatism movement emanated from these philosophers' rejection of "traditional assumptions about the nature of reality, knowledge and inquiry" (Kaushik & Walsh, 2019). The philosophers completely rejected the idea that knowledge about reality could be acquired through a single scientific method in social sciences (Maxcy, 2003).

Pragmatism holds to the notion that human actions can never be separated from past experience and beliefs that are born of that experience. Kaushik and Walsh (2019: 255) explain that "human thoughts are intrinsically linked to action". Pragmatists argue that the meaning of human actions is explained in their consequences. It then means that people's own internal motivations and experiences rather than the external world form their reality. Pragmatism acknowledges that there can be a single or multiple reality that can be researched empirically (Creswell & Plano Clark, 2011).

Subjectivism, which is the ontological position of this study, is the closest to the pragmatist perspective compared to the other probability interpretations, that is, frequentism, logicism and propensionism (Galavotti, 2019). This is due to the fact that subjectivism views a human being as an agent in the world whose actions are born of belief. Buchanan et al. (1998) posit that the pragmatic approach has an epistemological presupposition that there is no objective course and therefore no one reality. It supposes that reality is subject to people's minds, hence there is no universal objective and no verifiable knowledge.

Besides being best suited to a subjectivity ontology, pragmatism, according to Cherryholmes (1992), Morgan (2007) and Creswell (2014), allow for the following:

i. It can be applied to multiple realities and the truth is what holds true at that moment.

ii. There is freedom of knowledge enquiry methods, i.e., it accepts mixed methods of enquiry, borrowing insights from both quantitative and qualitative methods.
iii. It does not recognise duality of objectivity and subjectivity.
iv. The world is not one unit.
v. Methods of enquiry are based on the consequences, i.e., what the research intends to produce. There should be an acceptable rationale for choosing multiple enquiry methods.

Pragmatism as a philosophical stance therefore provides a theoretical lens that ensures greater understanding of reality and real-world practice. It should however be noted that "no scientific explanation of human behavior is ever complete" (Berliner, 2002: 20).

5.3.3 Axiological assumptions of the study

The value system assumptions form part of the last component of the philosophical stance, namely the axiological assumptions. It classifies whether reality can be said to be value free, also called value neutral or value driven (Pathirage et al., 2008). It therefore focuses on questions of ethics. Value-driven research is influenced by people's beliefs and experiences whilst in value free research, an objective criterion is employed for determination. Pure pragmatists as described by Dewey, one of the early pragmatists, are "value driven", as they apply strong ethical principles in their quest for knowledge (Mertens, 2010). They therefore solicit different points of view from a wide population using various enquiry methods to gain as much knowledge about a certain phenomenon and its consequences as possible.

According to the Stanford encyclopaedia, the role of values in social science has been met with controversy in relation to risk. The encyclopaedia recognises the need to be fully aware of the value system in the surrounding environment, such as human rights, the rights and welfare of future people including the need for sustainability, when conducting individual enquiries. Creswell (2014) explains that the pragmatic paradigm was accepted to provide a better theoretical basis for mixed methods research. It is against this background that the pragmatic paradigm was chosen for this particular study. However, it should be noted that since all assumptions are mere inferences or speculation, philosophical stances can rarely be proven empirically or otherwise (Scotland, 2012).

5.4 RESEARCH APPROACH

The research approach for this study was abductive, which employs both deductive and inductive approaches. According to Saunders et al. (2019), an abductive research approach moves back and forth between literature and empirical data as opposed to either purely moving from literature to data (deductive) or data to theory (inductive). It involves the observance of a phenomenon which is then supported by a plausible theory of how the phenomenon could have happened. The exploration of this plausible theory leads to the discovery of other “surprising facts”, which are then explored further.

This study sought to understand the phenomenon through exploring literature, deductively, and integrating it with broad themes from the qualitative enquiry, i.e., inductively. The resultant theorical supposition, i.e., the concept of unbounded irrationality which underlies the proposed conceptual framework, was tested employing a quantitative survey. The research therefore makes both empirical and theoretical contributions to the behavioural sciences body of knowledge.

The abductive research approach is flexible and complements the pragmatism research philosophy, which was the philosophical paradigm for this study. Saunders et al. (2019) posit that pure deductive or inductive is near impossible and practically, most researchers employ elements of both approaches hence abductive, although one approach might be more dominant than the other.

A further rationale for this choice was that, in as much as there is a wealth of literature in the context of corporate governance as well as behavioural sciences, there is little knowledge of the unbounded irrationality concept with particular reference to corporate governance research. The concept was thus explored with subject matter experts and results are reported in Chapter 6. Inductively deduced broad themes from the interviews governed the adaptation of existing instruments to subsequently test the concept with corporate managers in the Phase two survey.

5.5 RESEARCH DESIGN

The mixed methods approach employed for this study entails collecting both quantitative and qualitative data. The data are then integrated using “distinct designs that may involve philosophical assumptions and theoretical frameworks” (Creswell, 2014: 32). At the core of this approach is the assumption that combining the qualitative and quantitative approaches provides a superior and more complete understanding of the research problem than using either approach in isolation. When the approach was first widely adopted in the middle to late 1980s, it was on the premise that all methods had inherent biases and weaknesses and that employing both quantitative and qualitative approaches would neutralise these biases and weaknesses. It has been argued that employing only one method of enquiry is not adequate in social and human sciences studies and hence mixed methods are preferred (Newman & Benz, 1998).

The value of and rationale for the choice of mixed methods stemmed from the following:

i. Generally, mixed methods draw data from both qualitative and quantitative research, thereby neutralising the limitations of each approach (Newman & Benz, 1998).
ii. Practically, mixed methods “provide a sophisticated, complex approach to research that appeals to those on the forefront of new research procedures” (Creswell, 2014: 266).
iii. Multiple data enquiry is in line with the pragmatic epistemology of this study.

Although many designs appear in mixed methods, this study adopted an **exploratory sequential mixed method design,** discussed below, as supported by the pragmatic philosophical stance of the study.

5.6 EXPLORATORY SEQUENTIAL MIXED METHOD DESIGN

Exploratory sequential mixed method design is an approach in which a researcher first employs qualitative design in pursuit of exploring the views of participants or research subjects before embarking on quantitative data enquiry. The results from the qualitative enquiry are then utilised in the follow-up quantitative phase. This could be in the development, adaptation or identification of a survey instrument that fits the population under study (Creswell, 2014). The results can also be used to inform the specific variables that need to be included in the follow-up quantitative enquiry.

The overarching reason for employing this particular mixed research approach is that an exploratory design allows for the adaptation of a better measurement instrument, making it more suited to answering the particular research questions. Figure 5.2 illustrates the simple layout of the exploratory sequential mixed method design by Creswell and Plano Clark (2007).

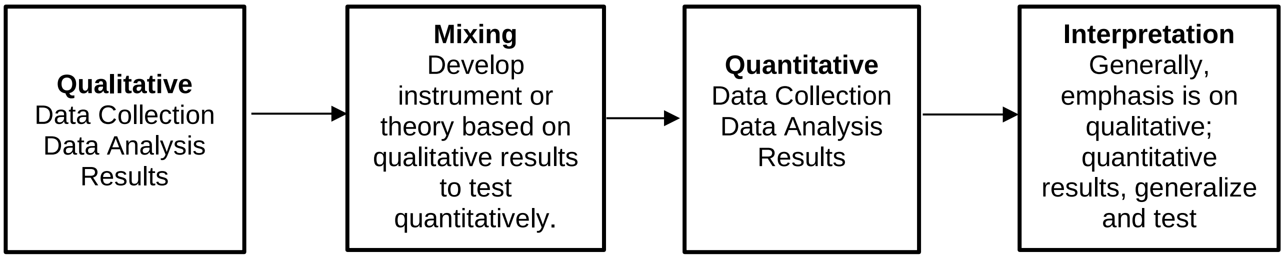

FIGURE 5.2: **Exploratory sequential research design**

Source: Creswell and Plano Clark, 2007: 1551

Creswell and Plano Clark (2007), as shown in Figure 5.2, explain that exploratory designs commence with a qualitative, in-depth exploration, building up to a secondary quantitative phase which is in some way related to the qualitative enquiry results. The authors explain that the design is most suited to a study where no or little empirical evidence exists, with no suitable measurements and instruments. In such an event, the researchers would need the expertise of subject matter experts to select or adapt an already existing instrument. It is imperative to note that the use of already existing instruments has the advantage of previously confirmed validity and reliability but would often need to be adapted to suit the particular research setting and population. Table 5.2 below sets out the exploratory sequential mixed method design for this study.

TABLE 5.2: Exploratory sequential mixed method design for attitudinal mediation in corporate governance–firm performance relationship

Research phase	Procedure	Output
Phase 1: Qualitative Data Collection	• Identify and perform in-depth interviews with a purposely selected sample of industrial psychologists • Discussion of broad themes found in literature with subject matter experts	Text from interview transcripts

Research phase	Procedure	Output
Phase 1: Qualitative Data Analysis	• Thematic analysis of data - Extraction of dominating themes using Spradley's (1979) method of analysis	Codes and themes
Selection of measuring Instrument	• Comparing and contrasting themes and subthemes with existing instruments • Selecting measuring instrument based on qualitative enquiry results • Adapting the measuring instrument based on design analysis through merging the data, connecting the data, or embedding the feedback data provided by subject matter experts	Measuring instrument for Phase 2, quantitative enquiry
Phase 2: Quantitative Data Collection	• Randomly select sample from population of managerial employees - Collect data through online surveys on multi-domain risk attitudes, firm performance and corporate governance practices using measuring instrument selected in Phase 1 study	Completed questionnaires/ surveys
Phase 2: Quantitative Data Analysis	• Quantitative data analysis covering: - Descriptive statistics - Factor analysis (EFA) - Correlation and regression analysis using PROCESS for SPSS	- Demographics - Factor loadings - Correlations - Regression statistics
Interpretation Development of risk attitude mediated framework for Corporate Governance-Firm Performance relationship	• Interpretation of quantitative data to include: - - The examination of associations between demographics and risk-taking attitudes/behaviours - Description of corporate governance and firm performance relationship - Description of corporate governance and firm performance	Development of a preliminary corporate governance–firm performance framework

Research phase	Procedure	Output
	relationship with risk attitude as a mediator	
Validation Validation of the framework for Corporate Governance-Firm Performance relationship	• Validation of quantitative results of risk attitude mediation corporate governance–firm performance: - Validation and model fit using Amos statistical package and adjustments made to the constructed framework to reflect the results from Amos - Confirmation of framework with subject matter experts	Development and subsequent validation of the final corporate governance–firm performance framework

Source: Own compilation

The study had a qualitative Phase (1) instrument selection with adaptation and a Phase (2) experimental quantitative enquiry. In this multi-step process, the study aimed to achieve the following:

i. Through a qualitative thematic analysis of data from subject matter expert interviews, carefully identify and adapt a suitable existing psychometric instrument for managerial employees targeted for quantitative analysis to augment with chosen literature review based corporate governance and firm performance measures. Detailed discussion is in Chapter 6.
ii. Through an exploratory mediation methodology, adjust the theoretical framework with insights from the subject matter experts. Detailed discussion is in Chapter 6.
iii. Employ the augmented instrument in the soliciting of data from a sample selection and perform quantitative analysis culminating in a risk attitude

mediated framework for corporate governance–firm performance. Detailed discussion of analysis is in Chapter 7.

iv. Confirm and validate the preliminary framework with subject matter experts. Validation with subject matter experts is in Chapter 7.

Such a research approach allows for the deduction of ideas or facts from existing literature and corroborating the ideas with mixed methods of enquiry with the intention of developing a more lucid framework for answering the research question.

5.7 RESEARCH STRATEGY AND TIME HORIZON

The research strategy and time horizon for the study was cross-sectional survey. Cross sectional survey is commonly used in social science research and entails collecting data and examining the phenomenon under study at a particular point in time from a diverse sample using a standardised questionnaire (Creswell, 2014). Spector (2019) argues against the notion that cross sectional research, in particular employed with self-report surveys, as in this study, are less reflective than longitudinal designs that collect data over a period of time. The author from a causal inference philosophical perspective asserts that cross sectional survey strategies can be as useful as longitudinal designs since strategies to control for variability of variables can be instituted through control variables. This study had two control variables, firm age and firm size to control for the impact of various variables on firm performance.

In addition, as this study sought to examine attitudes and personality traits of a specified population, these psychological attributes have been reported to be relatively stable (Cesarini, Johannesson, Lichtenstein, Sandewall & Wallace, 2010). As such, the analysis of these variables in a particular point in time can reflect the general psychological disposition of an individual. A cross sectional time horizon also had the advantages of capturing the prevailing state of the variables of interest within a relatively short time frame allowing for practicality in data collection and analysis.

5.8 DATA COLLECTION IN FIRST PART ENQUIRY THROUGH IN-DEPTH INTERVIEWS WITH SUBJECT MATTER EXPERTS

The methodology commenced with a qualitative enquiry. The first part of the enquiry constituted in-depth interviews with subject matter experts, i.e., industrial psychologists, with the intention of gaining more insight into the individual risk attitude variables that were suitable for the target population. A subject matter expert is someone with specialist skills, experience and/or knowledge in a specific field (Hopkins & Unger, 2017).

5.8.1 Unit of analysis

A unit of analysis in research can best be defined as "the entity that is being analysed in scientific research" (Dolma, 2010: 169). The sample unit for the first part enquiry was the "industrial psychology expert".

5.8.2 Target population

The target population for the first part in-depth interviews enquiry was industrial psychologists whose expert knowledge in psychology and psychometrics, together with their organisational experience, was utilised in the selection and adaptation of a suitable survey instrument for the study. The target population was drawn from Southern Africa, represented by Zimbabwe and South Africa, since this was the research setting.

The recruitment of participants was through referrals by colleagues in several business networks. To counter possible selection bias due to recruitment of participants from the same geographical space, the participants were, at the time of the enquiry, members of an internationally recognised association of psychologists with more than five years' experience.

5.8.3 Sampling method

Noble and Smith (2015: 4) assert that in qualitative studies, bias is largely reduced by purposely selecting participants as the sample is "constantly revised to meet the study aims". Participants for the in-depth interviews, i.e., the industrial psychologists, were selected through purposive sampling to ensure that the participants possessed sufficient information power for addressing the research objectives.

5.8.4 Sample size

Sample size for qualitative studies is guided by the concept of saturation (Mason, 2010). Unlike purely quantitative methods that employ power calculations, the saturation, which is the recommended sample size for qualitative methods, is based on the specific methodology, aim of the study, sample specificity and information power (Malterud, Siersma & Guassora, 2015). This means that the "more information the sample holds, relevant for the actual study, the lower the number of participants … needed" (Malterud, Siersma & Guassora, 2015: 1). Adding more participants does not necessarily lead to a better analysis since only one occurrence of data is enough to warrant consideration in the analysis framework.

Seven (7) interviews were conducted with selected subject matter experts with three (3) for the framework validation analysis. This less extensive sample size was guided by data saturation where the interview data was becoming repetitive and redundant with no substantial new insights or themes being drawn. The participants were selected on the basis of knowledge, expertise and experience in industrial psychology with five years as a minimum in industrial psychology experience, allowing for in-depth exploration of the research topic. The sample therefore had sufficient information power to address the respective research questions and provide a comprehensive understanding of the phenomenon under study, thereby reaching theoretical saturation. Data Saturation is not reached by the number of interviews, rather by the richness of the data collected (Creswell, 2014). A description of the interviewed subject matter experts' experience and professional affiliations is contained in Table 5.3 below.

TABLE 5.3: Participants profiles

Pseudonym	Experience and membership affiliation	Region
Participant 1	Master's degree in Industrial Psychology Registered with the Health Professions Council (HPCSA) 11 years' experience	South Africa
Participant 2	PhD candidate. Master's degree in Industrial Psychology.	South Africa

Pseudonym	Experience and membership affiliation	Region
	Registered with the Health Professions Council (HPCSA) Registered with the Society of Industrial and Organisational Psychology of South Africa (SIOPSA). 5 years' experience.	
Participant 3	PhD in Industrial Psychology Master's degree in Industrial Psychology Registered with the Society of Industrial and Organisational Psychology of South Africa (SIOPSA) 8 years' experience	South Africa
Participant 4	PhD candidate Master of Science in Occupational Psychology. BSc in Psychology Member of the Zimbabwean Psychological Association Registered with the Allied Health Practitioners' Council in Zimbabwe 10 years' experience	Zimbabwe
Participant 5	Master's degree in Industrial Psychology Registered with the Society of Industrial and Organisational Psychology of South Africa (SIOPSA) 10+ years' experience	South Africa
Participant 6	Master's degree in Psychology Member of the Health Professions Council 5 years' experience	South Africa
Participant 7	PhD in Consulting Psychology Master of Science in Occupational Psychology BSc in Psychology Master's degree in Business Administration Member of the Zimbabwean Psychological Association Registered with the Allied Health Practitioners of Zimbabwe 18 years' experience	Zimbabwe

The data was collected from the seven individual interviews with consideration given to the time most convenient to the participants. The purpose of the study and the consent statement were read to the participants before data collection as was stipulated in the ethical clearance certificate. The participants were also informed that the interviews would be confidential and therefore they would not be identified in any of the research emanating from the enquiry. An option to withdraw from the study at any point of the interview was given to them. All seven consented on the audio recordings and were also requested to sign the physical consent forms.

5.8.5 Data collection guide

The interviews were semi-structured and guided by an interview guide which had been forwarded to the participants days prior to the actual interview date. This had been done to enable the participants to provide informed consent, familiarise with the line of questioning, thus actively participate with the most relevant information (Seidman, 2013). Furthermore, Creswell (2014) asserts that distributing the interview guide prior to the actual interview empowers participants, leading them to believe that they have become part of the research process. This belief stemming from the collaborative approach encourages participants to suggest additional topics relevant to the discussion thereby enriching the data collection. Each interview on average took 60 minutes as this preferred time frame was neither too short or too long, giving unity to each interview therefore positing a chronological beginning, middle and an end for the participants (Seidman, 2013).

The interviews conducted on MS Teams were recorded and auto transcribed. The interview guide covered the following aspects:

i. Individual experience and expertise in industrial psychology of the participant.
ii. General insights into the psychodynamics of decision-making as informed by Chapter 3.
iii. Unbounded irrationality in relation to the five statements deduced by the study in Chapter 3:
    - Automatic cognitive capacities of the subject that decides.
    - No regard for knowledge availability of alternatives.
    - Deep-seated self-interests become default preferences.
    - No regard for availability of resources – financial, time, etcetera – in the decision-making process.
    - No prior understanding of what will happen if a certain action is taken, hence actions are attitudinal as opposed to reflective.

iv. Risk-taking domains relevant to managerial employees in South Africa and Zimbabwe.

The discussion guide is attached as Appendix 2A.

5.9 DATA ANALYSIS IN FIRST PART ENQUIRY WITH SUBJECT MATTER EXPERTS

Data analysis in exploratory design requires the data to be analysed separately with qualitative data analysed first (Creswell, 2014). In a qualitative enquiry, data collection and analysis often occur simultaneously and are practically similar across research; however, the presentation of the findings can differ depending on the envisaged outcome (Johnson, Adkins & Chauvin, 2020). Eldh, Arestedt and Bertero (2020), emphasise the need to create a verbatim display while being guided by a critical exploration of the purpose of and justification for including the quotations. Given the explanation from literature, the information from this qualitative enquiry is presented in a thick descriptive, narrative form and supported by carefully considered verbatim quotations from the participant interviews. This offers a lens through which the experts' own meanings attached to the concepts under study can be viewed. The study employed thematic analysis guided by a modified Spradley (1979) method of analysing unstructured data.

5.9.1 Thematic content analysis

Thematic analysis employs procedures for capturing patterns or themes across data sets drawn from a qualitative enquiry (Braun, Clarke, Hayfield & Terry, 2019). The first stage of analysis produced a template of coded themes. Template analysis allows for broad themes to be identified in hierarchies based on the specific research objectives and interview questions; this leaves room for manual analysis at these different levels of the hierarchy (Cassell, Buehring, Symon, Johnson & Bishop, 2005). Frequency was employed in selecting the most recurring codes across participants.

The following is the pragmatic view of thematic analysis as set out by Aronson (1995):

- A set of interview questions is prepared and forwarded to the participants in advance together with the information sheet for the study.

- Data are collected through the use of voice recorders from which the conversations will be transcribed.
- A classification system of broad themes is structured in accordance with the research objectives and interview questions. Subsequently subthemes are derived through more detailed manual analysis to obtain a comprehensive view of management risk attitudes in decision-making.
- The results found in the classification system are mapped with reference to (i) the data obtained and (ii) other categories identified.
- Results are cross tabulated. This is the process of quantitatively analysing the relationship between different themes coded. Cross tabulation will allow further exploration of the data through comparison of similarities and differences.
- The results are analysed in relation to reviewed literature and selected existing instruments to ensure accurate inferences from the interviews.
- The instrument is adapted.

The interview transcripts were thus analysed using open coding, individually, allowing for all possible themes to be identified before moving on to the next. The aim was to extract as many codes as applicable to allow for further logical categorisation. The study's qualitative phase was not to prescribe a new psychometric tool or instrument but rather to solicit the interviewees' perceptions from their expertise in the discipline of behavioural sciences, in order to adequately adapt an already existing psychometric instrument. In addition, the study was not concerned with the generalisability of the views solicited but rather with expert perceptions of the psychometric measures of individual risk attitude for the particular research setting and population. Using the identified primary themes, a literature review was done to inform the selection of the most suitable instrument. A combination of instruments was selected and adapted.

The participants are referred to as "interviewees" or "participants" throughout the study. Verbatim responses from the participants, i.e., quotations, are *'shown in italics with single quotation marks'.*

5.9.2 *The Spradley method of qualitative analysis*

The Spradley (1979) method for qualitative data analysis was adopted in this study for the thematic analysis since it was reported to be suitable for unstructured data. The approach has been used by other scholars like Atkinson and Haj (1996) in their study "Domain analysis for qualitative public health data". The five-step approach was modified to suit the particular analysis of this study by replacing step number two and three with comparative analysis and taxonomic analysis respectively. Steps four and five were removed altogether. Spradley (1979) five step method was proffered within the field of anthropology and ethnography, where the main aim is to understand cultural practices and beliefs of communities. The method is therefore more relevant when the participants are themselves members of the community and not third-party reporters, similar to the industrial psychologists in this study, thus the need to modify the method as suggested. Rigor and integrity of the analysis process was however maintained by employing the strategies of enhancing trustworthiness and transparency which satisfy the criteria for credibility, transferability, dependability and confirmability outlined in section 5.9.3.

Step 1: Domain/theme identification and analysis

Considering the interviewees' discourse, recurring domains of meaning in reference to the population being studied were identified. Each interview was indexed or coded, and the text was read line by line several times to assist with familiarisation of the narratives. The codes were then collated across interviews to come up with a preliminary list of codes which were reduced to broad themes. However, as is prevalent in qualitative enquiries, there was a need for carefully separating the interviewees' viewpoints and insights – as indicated in their narratives – from the preconceived domains or themes of the researcher/interviewer. The primary domains were referenced to the actual group of phrases said by the interviewees to reflect the interviewees' own words and the spirit in which these phrases were expressed.

Step 2: Comparative analysis across participants

The step replaced the original Spradley's step 2 of "focused observations", as it was not applicable to this study. Instead, comparative analysis was added to suit the particular analysis of this study. Comparative analysis of the data sets as extracted from participant views was carried out as a precursor to extracting dominant themes for the purposes of this study. Lester, Cho and Lochmiller (2020) suggest using frequencies to extract the dominant themes. This approach was also employed in this study.

Step 3: Taxonomic analysis

For the qualitative analysis of this study, taxonomic analysis was the third and final step of analysis. Taxonomic analysis involves searching for relationships and associations out of which the analysed data can be organised. Refer to Figure 6.1 for the taxonomic analysis.

5.9.3 Trustworthiness in qualitative research

Meticulous attention to validity and reliability issues in research is of paramount importance as this differentiates good from poor research, thereby enhancing the trustworthiness of the research (Brink, 1993). Threats to trustworthiness emanate from (i) the researcher, (ii) the research subjects, (iii) the social context or environment and (iv) the data collection and analysis strategies (Brink, 1993). Tactics and strategies to enhance the trustworthiness should satisfy credibility, transferability, dependability, confirmability (Lincoln, Lynham & Guba, 2011; Maher, Hadfield, Htchings & Eyto, 2018) and authenticity (Creswell & Miller, 2000).

i. Credibility

Credibility means the study measures what it intends to measure, ensuring that the study reflects the exact social reality of the research participants. Credibility was enhanced through a purposive selection of interviewees so as to solicit experts' views. In addition, a strategy of keeping the interviews short so as to reduce instances of fatigue and attention span biases was employed.

ii. Dependability

Dependability or consistency is "trustworthiness by which the methods have been undertaken and is dependent on the researcher maintaining a decision trail" (Noble & Smith, 2015: 34). According to Leung (2015), consistency translates to appropriateness of methods, processes and data. The methodology for this study was deliberately chosen to allow for the same answers to be obtained at any other given point.

iii. Confirmability

Confirmability is akin to objectivity in quantitative research. Strategies employed in this study included acknowledging and being aware of possible researcher bias. Brink (1993) explains that qualitative data are prone to researcher bias due to the researcher's subjectivity clouding the interpretation of the data and the fact that there is no statistical validation of the data.

iv. Transferability and applicability

Transferability is generalisability of research findings in quantitative studies. Applicability refers to whether research findings can be applied to other "contexts, settings or groups" (Noble & Smith, 2015: 34). Similarities between the people, time, location and other social contexts determine whether applicability can be achieved reasonably. A thick description of the particular research context can assist in assessing transferability – the strategy was adopted for this study. In addition, the aim of the study and the line of questioning were explained explicitly so as to reduce ambiguity.

v. Authenticity

Truth value or authenticity gives credence to the fact that there is no one reality and therefore recognises multiple realities. In this study authenticity was enhanced by presenting the research participants' viewpoints accurately, thereby reducing own bias emanating from personal experience (Noble & Smith, 2015). In addition, a search for disconfirming evidence, that is, information that is not in congruency with known truths or literature, was conducted.

The next section addresses data collection in the second part quantitative enquiry.

5.10 DATA COLLECTION IN SECOND PART ENQUIRY THROUGH A SURVEY

The second part enquiry was quantitative in nature through the administration of closed-ended questionnaires; the questionnaires were informed by Phase 1. Developing a framework with a properly quantifiable bias was required.

5.10.1 Unit of analysis

Determining the correct unit of analysis is crucial for every research endeavour. The most common units of analysis in organisational research are employees, top managers and teams (Dolma, 2010). The sample unit for this particular study was *"management employee",* as the risk attitudes investigated were personal attributes.

5.10.2 Target population

The population was drawn from the Southern Africa region i.e., Zimbabwe and South Africa. According to Smith (2018), restricting the geographical research setting to a context familiar to the researcher, in this case, Zimbabwe and South Africa, allows the researcher to gain a deeper understanding of the specific cultural, social, economic and environmental factors that may have a bearing on the phenomenon under study.

The recruitment of participants was through business-oriented online network platforms subscribed to such as the ACCA member online network provided by the ACCA body. Online professional networks are an emerging tool for sourcing participants due to the advantages of speed of sourcing, virtual snowballing effects and researcher accessibility (Stokes, Vandyk, Squires, Jacob & Gifford, 2019). The sample targeted for this study was at least 150 and online professional networks such as LinkedIn, which focus on professional and business networking and development, provide access to a very large population across the geographical divide that meets the inclusion/exclusion criteria for participation. The population was estimated to be more than 50 000.

To increase the representativeness of the sample, the target population for the second part survey enquiry was selected upon satisfaction of the following requirements:

- In managerial positions since they wield power and authority that impact corporate performance. In addition, this population was expected to possess credible knowledge of corporate governance practices and firm performance. The study targeted all levels of management, from junior to executive, as it endeavoured to be holistic in its approach and cover all hierarchies of decision-making in organisations.
- Employed in an organisation, across industries, operating in Southern Africa as represented by Zimbabwe and South Africa, to suit the research context.
- Only from “for profit” organisations.

The target population excluded:

- Board of directors (BOD) as the BOD is treated as any other corporate governance mechanism that ensures management-shareholder alignment.
- Managerial employees with less than three years in their current organisation.
- Excluded managers from enterprises that were family owned or from the small and medium-sized enterprises sector (SMEs) not registered in terms of the

Companies Act. This was done so as to curb the effects of voluntary application of corporate governance principles in these groups as they might not have separate shareholding and or be mandated to have Board of Directors.

The population thus comprised individuals in management positions employed in “for profit” organisations in Southern Africa, i.e., Zimbabwe and South Africa, with at least three years in the same organisation.

5.10.3 Sampling method

Respondents for the survey were selected through the simple random sampling method. Simple random sampling was chosen for the selection of survey respondents to ensure that each element in the population had an equal chance of being chosen, i.e., none-zero probability, therefore enhancing objectivity (Diamantopoulos & Schlegelmilch, 2000). Furthermore, Noble and Smith (2015) posit that in quantitative research, bias is normally reduced through random selection of participants.

5.10.4 Sample size

Hayes (2012), who was the inventor of PROCESS Macro, in his illustration of using mediation and moderation studies employed data from 129 participants. This implies that the seemingly conservative sample of 129 was statistically analysable in PROCESS, which was the software used in this study. Sample sizes of 155 have also been used for mediation analysis by Abu-Bader and Jones (2021) and were found to have adequate statistical power.

The study sample was 161 employees drawn from Zimbabwe (117) and South Africa (44). The sampled employees were predominantly from the Mining, Metals, Energy and Oils (60), Financial Services and Insurance (39), Manufacturing (14) and Fast-moving Consumer Goods (FMCG) (12); the rest were from other sectors. Table 5.4 shows the sample profile.

TABLE 5.4: Sample profile

Variable	Frequency	(%)
Gender		
Female	42	26.1

Variable	Frequency	(%)
Male	119	73.9
Age of participants		
Below 30	17	10.6
30-40	82	50.9
40 plus	62	38.5
Education		
Diploma/certificate	6	3.7
Undergraduate degree	42	26.1
Master’s degree	111	68.9
PhD/Doctoral degree	2	1.2
Role		
Executive/senior management	54	33.5
Middle management	78	48.4
Junior management	29	18.0
Number of employees in firm		
Less than 100	15	9.3
100-500	31	19.3
500 plus	115	71.4
Number of years of firm’s existence		
3-<5	6	3.7
5-10	34	21.1
10 plus	121	75.2

Discussion on the sample profile is in Chapter 7. Questionnaire design and distribution discussion ensues.

5.10.5 Questionnaire design

Data was collected through administering a multi-variable closed-ended questionnaire developed from already existing previously validated survey instruments, however validation of the resultant instrument was also performed in this study. This multi-variable questionnaire was a combination of corporate governance, firm performance and individual risk attitude measurement instruments, as proposed by the Phase 1 qualitative enquiry.

Information that was collected included:

- General demographics
- Organisational statistics
- Firm performance
- Corporate governance practices
- Individual risk attitude, emotional intelligence and neurotic tendencies

The section below details the measurement instruments employed in the study.

Measuring instruments

Five instruments were used in the study as given in Chapter 6, section 6.4. Important properties of a measuring instrument are its reliability and validity which are discussed as deducted from previous studies under section 6.4. Below is a summary of the instruments.

<u>Firm performance</u>

Firm performance was measured on a three-year average employing the adapted version of Spanos and Lioukas's (2001) scale which comprised three items measuring profit margin, asset growth and return on assets against the closest competitor. These were measured on a five-point Likert scale ranging from far below average (1) to far above average (5).

<u>Corporate governance</u>

Corporate governance was measured by a six-item scale on average over three years. It was scored on a five-point scale ranging from strongly disagree to strongly agree with "1" indicating strongly disagree and "5" strongly agree. An example item is, "The positions of CEO and Board Chairman are not held by one individual". All items were assumed to measure a single construct.

<u>Individual risk attitude (risk attitude)</u>

Five subscales comprised the individual risk attitude scale, i.e., financial, business, psychological, ethical and social. The items were scored on a five-point scale with "extremely like me" =1 to "extremely unlike me" =5 as was in the original scale. The development of the scale was discussed in Chapter 6 through exploration of the qualitative enquiry.

The financial subscale measures the extent to which people are predisposed to take financial risks. An example item is, “I seek new financial investments even if their outcomes may be risky”. Item 2 is reverse scored as guided by the original instrument(s). This subscale has four items. The second subscale measures predisposition to business risk. Items 3, 6 and 7 are reverse scored as in the original instrument(s). The third subscale assesses the extent to which people are willing to take ethical risks. It has four items. The fourth subscale measures social risk and has four items. The last subscale measures psychological risk and has four items.

Neuroticism

Neuroticism was measured by a 10-item questionnaire taken from Goldberg (1999) from the IPIP 50. The items are measured on a five-point Likert scale with 1=extremely unlike me to 5=extremely like me. Items 2 and 4 were negatively worded. An example item is, “Get irritated easily”.

Emotional intelligence

Emotional intelligence was measured by a 10-item questionnaire taken from Schutte et al. (1998). It has two subscales with one measuring self-awareness and the other self-regulation. As above, the items are scored on a five-point Likert scale from “extremely unlike me” to “extremely like me”. An example item from the self-awareness subscale is, “I am aware of the non-verbal messages I send others”.

The construction of the questionnaire is discussed in detail in Chapter 6, Sections 6.4 and 6.5. The questionnaire employed in the study is attached as Appendix 3.

Pilot testing of the survey instrument

To ensure that the survey instrument was relevant and easy to comprehend, a pre-test on a sample selection of 10 respondents from across management levels was conducted. In research, this is done to ensure that ambiguity and unclear statements or words are eliminated from the questionnaire (Polgar & Thomas, 2000). Pilot testing also exposes weaknesses in design (Saunders, Lewis & Thornhill, 2009). The candidates for pretesting were purposely sampled based on their availability and willingness to participate in the pilot test.

The questionnaire pilot tested contained corporate governance verbatim questions that were informed by 16 of the 17 principles of the King IV and six other corporate governance practices as deduced from literature review in Chapter 2. The pilot group noted the King IV questions to be too long and confusing which necessitated the including only the six corporate governance principles from literature review to enhance the reliability of the questionnaire. Examples of the initial corporate governance are listed below:

> *The organisation's core purpose, its risks and opportunities, strategy, business model, performance and sustainable development are all inseparable elements of the value creation process.*
>
> *The governing body ensures that the evaluation of its own performance and that of its committees, its chair and its individual members, support continued improvement in its performance and effectiveness*.

Pertaining to the risk attitude, neuroticism and emotional intelligence, the long versions were administered which the pilot group reported to be too tedious to respond which necessitated the use of the shorter versions in the final survey. The instrument was thus adjusted based on the results of the pretesting to produce the final questionnaire that was administered to the sample of the study.

Distribution of the instrument

The questionnaire was distributed through online surveys sent as links on emails or direct messaging since this allows for a wider audience to be reached and addresses issues of logistics. The questionnaire was developed employing Google's free web-based application, Google Forms, which requires one to be logged on to access. The application generates a unique web link to allow access by participants. The information by the participants is automatically saved after submitting the questionnaire. Google forms still retains anonymity of all participants when set up as such, which was the case in this study.

Online surveys have grown in popularity as an innovative medium for collecting data, moving away from traditional methods such as postal mail, telephone and emails. As was previously reported, no significant differences have been found in terms of data consistency between responses solicited from traditional methods and online surveys

(Kypri et al., 2004). However, it has been noted that online surveys have the advantage of adding system controls that may require a question to be responded to before moving to the next or prohibiting submission until all the questions have been answered. Other advantages of online surveys over traditional methods include increased access to individuals in different geographical areas from the researcher, a wider audience and the convenience that comes with automatically collated data (Wright, 2017).

5.11 DATA ANALYSIS IN SECOND PART QUANTITATIVE ENQUIRY

This study employed descriptive statistical analysis in the initial stages of data analysis of the quantitative survey. Thereafter, exploratory factor analysis (EFA) was employed as a method of choosing sub-variables with the most factor loadings. Correlation and regression analysis were conducted with mediation tested using SPSS PROCESS software. Data validation was done through Amos statistical software and confirmed by subject matter experts.

5.11.1 Descriptive statistics

Descriptive statistics is a set of procedures that allows for collection, measurement and interpretation of quantitative data. Descriptive analysis in exploratory data analysis summarises, in the form of graphical and numerical presentations, all data collected from a quantitative data set. It enables the study to draw preliminary insights into the data distribution and nature of responses given (Diamantopoulos & Schlegelmilch, 2000).

Descriptive statistics employ the use of mean, standard deviations and frequency distributions (Fisher & Marshall, 2009). Statistical mean is a measure of central tendency indicating where data are concentrated, while standard deviation indicates the points of dispersion of a dataset from the mean. The more concentrated the data around the mean, the smaller the standard deviation.

For this study, the mean, mode and median, all measuring central tendency, were the descriptive statistics chosen for preliminary analysis. Table 5.5 shows the definitions of these statistical terms.

TABLE 5.5: Definitions of common statistical terms for descriptive statistics

Term	Measurement	Definition
Mode	Central tendency	The numerical value with the greatest frequency
Median	Central tendency	The middle score of a rank-ordered distribution
Mean	Central tendency	The average score

Adapted from Fisher and Marshall (2009)

Following the descriptive analysis, the Statistical package for the Social Sciences (SPSS) was used for the analysis of data.

5.11.2 Exploratory factor analysis

Factor analysis is generally categorised into either exploratory factor analysis (EFA) or confirmatory factor analysis (CFA) (Williams, Onsman & Brown, 2010). As the current study employed self-report questionnaires, EFA was adopted as it is the most common method for interpreting self-reported data. In support, Watkins (2018) posits that EFA is employed in developing and validating theories and measurements in psychology, which is line with the objectives of this study. Exploratory factor analysis is a multivariate statistical method that attempts "to identify the smallest number of hypothetical constructs, also known as factors, dimensions, latent variables, synthetic variables or internal attributes, that can parsimoniously explain the covariation observed among a set of measured variables" (Watkins, 2018: 219).

EFA identifies common factors that describe the order and structure among observed variables, i.e., factors depict a common variable that accounts for correlations amongst observed variables that are assumed to influence the latent construct they are measuring. As in this study and all the other behavioural social sciences, factors are unobservable human characteristics, which are shown through the differences in scores from individuals on the observed variables (Tucker & MacCallum, 1997).

The five step EFA protocol by Williams et al. (2010) was followed for this study. The respondent data obtained were first tested for suitability for EFA. In this regard, the tests conducted were the Kaiser-Meyer-Olkin (KMO) and Bartlett's tests. The Kaiser-Meyer-Olkin (KMO) measures the sampling adequacy with the Bartlett's test assessing the suitability of the respondent data for factor analysis. The KMO statistic is in the range of 0 and 1 with 0 indicating the unreliableness of the factor analysis (Field, 2009). An index of 0.5 is considered suitable for factor analysis (Williams et al., 2010). The Bartlett's test of sphericity should also be significant, i.e., with a value of $p < .05$ for EFA to be suitable. The data obtained were subjected to the principal component and factor extraction method with Varimax rotation as the rotation method (Ramli, Abu-Hassan & Arifin, 2016).

The reason for such a thorough and methodical factor analysis was to isolate items with high factor loadings in the resultant pattern matrices. Factor loadings shed light on those factors that taken together explain most of the participants' responses. Conclusions drawn were generalised to the whole population.

5.11.3 Statistical mediation analysis

For regression-based path analysis, the study considered using Hayes' PROCESS Macro for SPSS or structural equation modelling (SEM) for the mediation model. Hayes, Montoya and Rockwood (2017) posit that whatever analytical strategy is used the results are largely similar; hence the choice of programme is inconsequential. The statistical analysis of mediating effects for this study was thus conducted using Hayes' PROCESS Macro. The choice of Hayes PROCESS was influenced by the following:

i. Hayes et al. (2017) assert that SEM requires more programming skill and hence code which is something PROCESS does automatically.
ii. Any programme can use ordinary least squares (OLS); however, PROCESS offers the advantage of bootstrapping methods in making statistical inferences since these statistics "have irregular sampling distributions, making inferences using ordinary methods problematic" (Hayes et al., 2017: 77). With PROCESS, all this is done in the background by the programme, saving considerable effort.
iii. Disagreeing with Pek and Hoyle (2016), Hayes et al. (2017) posit that PROCESS is simpler to implement than SEM and hence claim that most scholars will find it easier to use than SEM.

iv. SEM solves the equations simultaneously through iteration and maximum likelihood while PROCESS solves the equations independently, which is a modern way of analysing indirect effects.

v. PROCESS has become especially popular in business and marketing research (Hayes et al., 2017).

PROCESS is “an observed variable OLS and logistic regression path analysis modelling tool” (Hayes, 2018: 4). PROCESS is employed in estimating direct and indirect effects in mediator models, be it in parallel or serial models, as well as in testing interactions in moderation models. It works in single or multiple mediators and/or moderator models, testing simple and also conditional indirect effects while probing simple slopes and regions of significance.

PROCESS requires at least two regression models; as this study employed multiple regression analysis, it met PROCESS requirements. Ordinary least squares regression is used to estimate the parameters of each equation separately, meaning that the parameter estimations of one equation is independent of estimations in the other.

Figure 5.3 is the PROCESS Macro model 4 applicable to this study showing mediation with two moderators in the form of the two control variables of firm size and age.

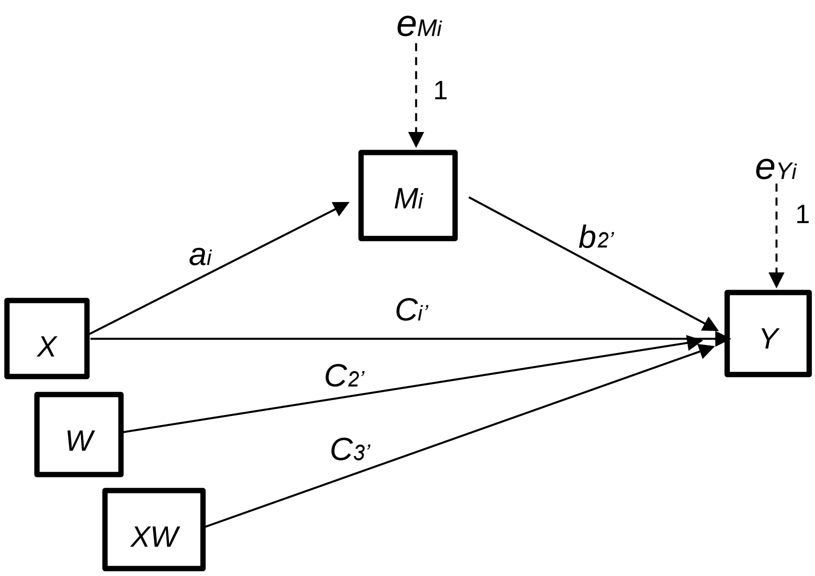

FIGURE 5.3: PROCESS Macro statistical diagram for risk attitude mediation in corporate governance–firm performance relationship with firm age and size as control variables

Source: Hayes (2018)

The statistical diagram above for individual risk attitude mediation in the corporate governance–firm performance relationship with firm age and size as control variables as given by PROCESS explains the following:

Indirect effect of X on Y through $M_i = a_i b_i$ and

Conditional direct effect of X on $Y = c_1' + c_3'W$

This model allows for up to 10 mediators operating in parallel; however, the study at this point had one mediator, individual risk attitude.

5.11.4 Validity and reliability in quantitative research

The validity and reliability of the individual instruments for this study sample are discussed in Chapter 7, section 7.3. According to Le Comple and Goetz (1982: 32), validity is concerned with “accuracy and trustfulness of scientific findings”, such that a research study should demonstrate what is actually in existence. Reliability is related to consistency, stability and repeatability of data and related data enquiry methods (Selltiz, Wrightsman & Cook, 1976). The research methods should yield the same information when applied repeatedly to more or less comparable subjects.

Leedy and Ormrod (2014) maintain that by increasing the reliability of the measurement instrument, one also increases its validity. The internal consistency and reliability of the questionnaire was also tested employing the Cronbach’s alpha coefficient. The Cronbach's alpha coefficient tests internal consistency (Cronbach, 1951) and was selected for this study as it is used for attitudinal measurements, including Likert scales, which were employed in this study. The Cronbach’s alpha reliability coefficient ranges from 0 to 1. Hair et al. (2021) give guidelines for the quality levels of scale reliability: 0.70 is the minimum acceptable level and 0.95 is the maximum to curb for indicator redundancy with 0.80 to 0.90 as the recommended level. However, Zainuddin (2015) asserts that a Cronbach’s coefficient of 0.6 is still acceptable for ensuring internal consistency. A Cronbach’s coefficient of 0.7 was taken as the threshold for this study.

Convergent validity was determined using the average variance extracted (AVE). AVE assesses the degree of confidence that the items in a scale are measuring well the construct in question (Campbell & Fiske, 1959). The Fornell-Larcker (1981) criterion of acceptable level of 0.50 AVE was used in this study.

For normality of the data distribution, skewness and kurtosis were analysed through the descriptive analysis function in SPSS version 25. Outliers were identified through histograms and box plots and winsorised by substituting them with the highest value that was not an outlier (Field, 2018).

5.12 CONSTRUCTION OF THE CORPORATE GOVERNANCE–FIRM PERFORMANCE FRAMEWORK

The preliminary and evolving risk attitude mediated corporate governance–firm performance framework informed by the quantitative data enquiry was presented to two of the previously interviewed subject matter experts. The purpose of this exercise was to validate and/or confirm truthfulness of representation of the framework in line with known truths or literature. In addition, this was in alignment with the epistemic assumptions of pragmatism which advocate multiple enquiry methods to gain knowledge.

The preliminary conceptual framework was then adapted based on this further insight provided by the subject matter experts to come up with the final risk attitude mediated corporate governance–firm performance conceptual framework.

5.13 ETHICAL CONSIDERATIONS

Researchers need to consider ethical issues that might arise in research (Hesse-Biber & Leavy, 2011), since social sciences research involves collecting information from people about people (Punch, 2005). Ethical issues are considered in order to protect research subjects, develop trust, promote research integrity and guard against impropriety that might reflect on research subjects' organisations (Israel & Hay, 2006). The aforementioned authors explain that ethical issues are concerned with disclosure of personal information, cross-cultural contexts, authenticity and credibility of the study. Pertaining to this particular research, ethical issues also extend to online surveys' data collection privacy. The following measures were implemented:

i. The Unisa policy on research ethics was applied. The researcher was issued with an Ethical Clearance Certificate (Certificate number 2022_SBL_DBL_004_FA on Appendix 1) from the Research Ethics Review Committee (RERC) before embarking on data collection.

ii. The research anticipated the participation of humans to be in the low-risk category where the only foreseeable risk was one of potential inconvenience or discomfort to the participants.
iii. On collection of data, the researcher ensured that there was voluntary consent from participants and that the rights of participants were protected.
iv. Transcriptions, interpretations and reports pertaining to the qualitative enquiry were made available to interviewees.
v. The participants were informed of all the data collection tools and devices and thus could make an informed choice as to anonymity. Note that this only applied to the interviewees, as all participants in the second phase quantitative enquiry remained anonymous.
vi. Participants' rights and wishes were considered first in reporting the data collected.
vii. The data collected were for the primary purpose of conducting this study and there was no tampering with the responses received or amendments made. The data could only be accessed by the researcher and a statistician who had signed a non-disclosure agreement, for the purposes of statistical analysis.
viii. All records were to be kept in a manner that would ensure utmost confidentiality for the university's required time of retention.

Pertaining to online professional networks recruitment, the following guidelines given by Gelinas, Pierce, Winkler, Cohen, Lynch and Bierer (2017) were followed:

- The researcher ensured that the privacy and other interests of the online professional networks' users were respected.
- There was absolute researcher transparency.

The chapter concludes with a summary.

5.14 SUMMARY

The aim of this research was to develop a framework that explained the corporate governance–firm performance relationship. The chapter commenced by laying the philosophical foundation of the study with ontological and epistemological assumptions being grounded in subjectivity and pragmatism respectively. The exploratory research design was justified as the research design for the study. Two-part data collection and analysis were discussed with validity and reliability pertinent to each part highlighted. The first part data collection and analysis entailed in-depth interviews with subject matter experts in order to inform the particular measurement instrument for individual risk attitude. The second part collection and analysis comprised the administering of online surveys to a randomly selected group of managers. The chapter concluded by exploring the ethical issues that could arise in the course of such a research study.

6 CHAPTER 6: RESULTS OF THE QUALITATIVE ENQUIRY AND ADAPTATION OF THE SURVEY INSTRUMENT

6.1 INTRODUCTION

In this chapter, the results of the analysis of qualitative data from interviews with subject matter experts are presented. The aim of the qualitative data enquiry was (i) establish the description of unbounded irrationality as it pertains to this study (ii) to inform the selection and adaptation of the quantitative survey instrument with the best psychometric properties for the population targeted and (iii) adapt the framework with insights from the enquiry. The chapter chronicles the step-by-step approach to the qualitative analysis of the seven individual interviews conducted. Main themes emanating from the interviews with subject matter experts are highlighted with a taxonomic analysis of the psychological variables being presented. The chapter concludes by presenting the adapted survey instrument and evolving corporate governance – firm performance framework thus far.

The empirical research questions to be addressed by this data enquiry are:

EQ 1: How is unbounded irrationality, as it pertains to the formation of individual risk attitudes in decision-making, understood and best described by subject matter experts?

EQ 2: What are the individual risk attitude domains relevant to managerial employees as deduced from subject matter experts' insights?

EQ 3: How may a framework for the corporate governance–firm performance relationship best be conceptualised, according to subject matter experts?

6.2 REPORTING THE FINDINGS

Seven interviews were conducted with purposefully sampled Industrial psychology experts. Analysis of data was conducted through thematic analysis as guided by Spradley (1979) method of analysis of unstructured data. Below the analysis ensues.

6.2.1 Unbounded irrationality as understood by subject matter experts

As unbounded irrationality was the underlying assumption for the study born from adjacent literature on rational choice theory and bounded rationality, it was of importance to explore the concept as understood by subject matter experts. When participants were asked to explain what they understood by the term "unbounded irrationality", all of them save for one indicated that the term was new to them. They, however, deduced the meaning from the perspective of bounded rationality, a term coined by Herbert A. Simon and discussed in Chapter 3.

Table 6.1 captures verbatim the subject matter experts' understanding of unbounded irrationality.

TABLE 6.1: Defining unbounded irrationality

Pseudonym	"What is your understanding of unbounded irrationality?"
Participant 1	*'So, I have never heard of the concept'*
Participant 2	**'***No, I've never heard of unbounded irrationality, but If I could actually apply my mind, I would say that unbounded in the sense that they are no boundaries and borders and irrationality, of saying OK, is it rational?'*
Participant 3	*'Unbounded irrationality. I looked a little bit at it [before the interview]. I must tell you I'm not too sure what that's about*.'
Participant 4	*'Irrationality …. could actually be a function of neuroticism...'* with unbounded irrationality *'bordering on bipolar disorders… or extreme neuroticism.'*
Participant 5	*'Most people talk about the bounded rationality, you know, so the unbounded, my interpretation is that [it] is the opposite.'*
Participant 6	'*It was my first time [hearing it] with you*.'
Participant 7	*'I think I once heard about it…yeah… we used to talk about bounded rationality, so this is, I believe, the other side of it'*

The only participant, Participant 4, that professed to know the term explained that unbounded irrationality was far removed from facts and objectivity. The participant bemoaned the failure by psychologists to test for bipolar and schizophrenia disorders in people occupying very high positions in organisations, resulting in them being accused of acting irrationally while they should in fact be committed to a psychiatric ward. The participant said that "unbounded irrationality" bordered on neuroticism. Davidson (1982) claimed, in line with Participant 4's assertions, that irrationality was evidenced in inconsistencies in the pattern of emotions, attitudes and actions.

The study made deductions from literature and formulated five statements that described unbounded irrationality in relation to decision-making. All the participants generally agreed with the statements, notwithstanding minor disconfirmations. Table 6.2 summarises the description of unbounded irrationality as guided by the statements presented to the subject matter experts.

TABLE 6.2: Unbounded irrationality description

Subject matter experts	**Statements describing unbounded irrationality**				
	Automatic cognitive capacities of the subject that decides.	No regard for knowledge availability of alternatives.	Deep-seated self-interests become default preferences.	No regard for availability of resources such as financial and time in the decision-making process.	No prior understanding of what will happen if a certain action is taken, hence actions are attitudinal as opposed to reflective.
Participant 1	Agree	Agree	Agree	Agree	Agree
Participant 2	Disagree	Agree	Agree	Agree	Agree
Participant 3	Agree	Contextual	Agree	Contextual	Disagree
Participant 4	Agree	Agree	Agree	Agree	Agree
Participant 5	Agree	Agree	Agree	Agree	Agree
Participant 6	Disagree	Contextual	Contextual	Contextual	Disagree
Participant 7	Agree	Agree	Agree	Agree	Agree
Count	**5**	**5**	**6**	**5**	**5**

Color Codes
Green – Strong affirmation
Yellow – General affirmation
Red – Disagree

The statements and subject matter experts' opinions are presented below.

i. Automatic cognitive capacities of the subject that decides

Five of the subject matter experts agreed with this statement indicating the power of heuristics in decision-making. Below are verbatim quotations from some of the participants that agreed with the deduction from literature.

> *'And then after you've made the decision, then you go back and say, OK, let me justify why I made this…'* **Participant 5**

'You are not fully conscious of what is happening with your mental processes. You cannot fully explain how or why you're doing it, but you're just doing it … you are not conscious of the key drivers …' **Participant 7**

The subject matter experts' explanations echo those of scholars that highlight the possible presence of heuristics in decision-making (de Andreis, 2020; McCaughey & Bruning, 2010; Sternberg & Pretz, 2005). However, two participants disagreed with the statement, stating that behaviour was not wholly automatic as people always sought to self-preserve.

Below are the verbatim quotations from the participants that disagreed.

'I think people check, I don't think it's that automatic… if it's going to benefit me, but not going to benefit everyone, the person checks first. People just check how far they can get away with stuff… this is …that self-preservation.' **Participant 6**

'Ohh no no because it's quite the opposite. They will still look at other avenues because unbounded, it's all about that flexibility … and thinking outside the box …having different viewpoints.' **Participant 2**

The understanding derived from these participants' explanations was that people always seek to self-preserve and that is in line with the study's description of unbounded irrationality, which showed that the disconfirmations were a matter of semantics.

ii. No regard for knowledge availability of alternatives

Five of the subject matter experts agreed with statement (ii), with two positing that it was contextual. Below are some of the verbatim quotations from two of the participants.

'If you don't know the alternatives, you are in a different realm. You're going to look for new ways which don't exist, which you don't know of…' **Participant 7**

'I think with the majority of what ends up happening is people come in to do a job and then the demands of life get so heavy that they can't hold everything …' **Participant 1**

Participant 3 posited that it was contextual and only applicable if the person was morally compromised, so self-preservation would still be the ultimate gain.

iii. Deep-seated self-interests become default preferences.

Statement (iii) was easily understood and instantly agreed to relative to the other statements, making it the most applicable explanation for unbounded irrationality amongst the subject matter experts. On reflecting on the statement, the subject matter experts had the following to say:

'… *they cannot become, they are* [default preferences].' **Participant 3**

'I agree with that to an extent. The main motivation is flight or fight, so whatever you come up with or whatever decision you make is to avoid pain and increase pleasure, so it becomes default.' **Participant 7**

The subject matter experts therefore echoed the same suppositions as Hobbes, Freud and Maslow as was given in Chapter 3 that humans are driven by self-interest/desires/needs.

iv. No regard for availability of resources such as financial and time in the decision-making process

Statement (iv) received 5 affirmations from the subject matter experts with two other participants, Participants 3 and 6, supposing that it was contextual. The statements from the subject matter experts align with cognitive biases such as overconfidence and hubris that would then subject an individual to self-grandiosity and not consider any limitations while making a decision. Below are two of the participants' sentiments.

'…so, when you are using the unbounded irrationality for your decision-making, now you're saying you have no limitations. what normally binds my decision or limit my decision-making is not there ….' **Participant 7**

'If we agree that they are neurotic then I agree with the statement ...'. **Participant 4**

A verbatim quotation from one of the subject matter experts that supposed the statement was contextual is below.

'I think sometimes...40 [percent of the times].*'* **Participant 6**

v. **No prior understanding of what will happen if a certain action is taken, hence actions are attitudinal as opposed to reflective**

Five of the subject matter experts agreed with statement (v), with two disagreeing with it. Two of the five that agreed had the following to say:

> *'I do agree with that again because you can't reflect on what you are not aware of …'* **Participant 7**

> *'So, sometimes you don't have the luxury of going through research ... You have to make decisions there and there. So, the more decisions you make, the more comfortable you become making those decisions.'* **Participant 5**

Participant 6 disagreed with the statement, highlighting that people did reflect, with Participant 3 explaining that people liked to think they were in control and used denial for self-preservation unconsciously.

6.2.1.1 *Is human rationality unboundedly irrational?*

When the participants were asked whether they believed that human rationality/reasoning was unboundedly irrational, the consensus was that reasoning was to a large degree unboundedly irrational but influenced by other factors such as personality traits, emotional intelligence and the environment in which the decision was made. Two of the participants narrowed down personality influences to neuroticism.

Participant 3 posited that one had to be completely altruistic not to be unboundedly irrational in circumstances laden with self-interest opportunities. Two of the participants (Participants 3 and 6) spoke about irrationality being about self-preservation, even when someone was totally altruistic. Participant 3 concluded abstractly, stating that unbounded irrationality might very well be rational in its irrationality and thus supporting Nickerson (2008), who posits that what might be rational for one individual might not be for another.

> *'It might be very rational in its irrationality.'* **Participant 3**

> *'…to a greater extent, yes, because the way I look at the at a human being, a human being is a complex machine which is very difficult to understand. If you just check the inventions of the past few years, you realize that human beings defy logic.'* **Participant 7**

> *'Sometimes there are no limitations, sometimes you can't even explain how they decide or how they make their decisions … and one of the aspects is after the decision, when you review in hindsight, you discover that, yeah, this was a brilliant decision, but when you were making that decision, it was not like that. It was sort of illogical or it didn't make sense. It would only make sense after… sometimes, even after some years.'* **Participant 7**

Participant 7's statement about realising in hindsight that the decisions made were probably "brilliant", can be inferred to mean that even decisions that might seem well thought out could have just been a shot in the dark, pointing to the possible influence of heuristics and other cognitive biases, thus irrational.

In conclusion, the subject matter experts in reference to Table 6.2 agreed with most of the deductions made by the study pertaining to unbounded irrationality. The subject matter experts that disagreed with some aspects did so on the premise that everything done by an individual was done so with self-preservation in mind. This supposition agrees with the description of unbounded irrationality that deep-seated self-interests become default preferences. All the statements received considerable affirmation from the subject matter experts.

After having established that unbounded irrationality was potentially responsible for most of the decision-making by individuals, the discussion migrated to individual risk attitude born of the unbounded irrationality and the respective domains under which decision-making is undertaken.

6.2.2 Risk-taking domains as understood by subject matter experts

Subject matter experts were asked what the possible drivers of risky behaviours in humans were with reference to the particular population being studied. To further guide the discussion, specific insights into randomly selected three measurement instruments' risk domains – the DOSPERT (Blaise & Weber, 2002), Risk Taking Index (Nicholson et al., 2005) and Attitude Towards Risk (ATQR) (Franken, Gibson & Rowland, 1992) – were solicited. The participants were not limited to these instruments but asked to add other relevant domains for the chosen survey population.

Table 6.3 details the individual risk attitude domains extracted from the discussion with the subject matter experts.

TABLE 6.3: Identified themes for individual risk attitude domains

Identified domains	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Count
Ubuntu		x	x					2
Culture		x		x		x		3
Relationships		x	x			x	x	4
Gender					x	x		2
Social	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**7**
Psychological	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**7**
Nature	x		x		x		x	4
Organisational climate		x				x	x	3
Organisational culture			x	x			x	3
Business	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**7**
Financial	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**7**
Resources	**x**		**x**	**x**	**x**	**x**	**x**	**6**
Ethical	**x**	**x**	**x**	**x**	**x**	**x**	**x**	**7**
System	x		x	x				3
Career	x		x					2
Education		x						1
Health		x				x	x	3
Religion		x						1
Physical	x							1
Recreational	x			x				2

In Table 6.3 the red rows show the most recurring domains across the subject matter experts. This was informed by the count column which depicts the results of the comparative analysis as advised by Lester et al., (2020) who suggest using frequencies to extract the dominant themes. Below is Table 6.4 with some verbatim quotations from the participants to support the risk domains identified.

TABLE 6.4: Dominating domains extracted

Primary domain/ theme	Verbatim quotations from participants
Social	*'I grew up in a poor area, [where I used to say], when I grow up, I want to be rich… so if the opportunity presents itself, you know the person is not going to [wait].'* **Participant 5**

Primary domain/ theme	Verbatim quotations from participants
	'Some people have a natural disposition towards risk with some having it as a learnt behaviour due to the environment one has been in.' **Participant 4**
Business	*'… so it depends again on the environment that that decision is wanted…because of the fact that in the business environment they might be scared or terrified to lose out millions … of putting [basing] a decision on rather lack of a better word uncalculated factors or uncalculated motives.'* **Participant 2**
Psychological	*'Impulsive antisociality is the antitheses of fearless dominance or the opposite of fearless dominance...if impulsivity is high and they [someone] struggle with anger management, then they are likely to be risk takers.'* **Participant 4** '*Managers have more stress…and you know what sort of behaviours emerge when they're under stress.'* **Participant 1** **'***Genetic makeup...*' **Participant 4** *'Some people have a natural disposition towards risk with some having it as a learnt behaviour due to the environment one has been in.'* **Participant 4**
Financial	'*Corruption is quite topical and almost endemic to Zimbabwe.'* **Participant 4** *'… so, I think for most people … the resources are a scarce commodity.'* **Participant 5** **'***What about these fund managers that work with the economy … they have to take risks to make money for people.***'** **Participant 3**
Ethical	*'Corruption is quite topical and almost endemic to Zimbabwe… unsanctioned salary increases.'* **Participant 4** *'Where people … don't have the necessary skills, but they claim to have those skills, so you know, being truthful.'* **Participant 5** *'Context and person, I think, because in that case talking about systems, the system wants its corruption…so the system is looking for somebody to be corrupt [with].'* **Participant 3**

Due to emotional intelligence and personality having been singled out to be moderators of individual risk attitudes by most of the participants, the ensuing section examines their possible influence on the outcome, firm performance. It further discusses prior literature in light of the new insights provided by the subject matter experts so as to form a strong theoretical argument that can justify the inclusion of the moderating variables in the existing exploratory framework.

6.2.3 Individual risk attitude moderators

A moderator in research is a variable that "influences the nature e.g., magnitude and/or direction of the effect of an antecedent on an outcome" (Aguinis, Edwards & Bradley, 2017: 2). In statistical terms, it is when the relationship between the independent and dependent variable is changed due to the changes in the moderator variable.

The two variables identified as moderators, emotional intelligence and personality, relate to the following questions in this study:

i. When, i.e., at what point, will the moderator variables influence the outcome, directly or indirectly?
ii. At what level of complexity will the variables interact with the already existing mediator and independent variable to influence the dependent variable, i.e., is it a simple moderation analysis or a multi-group analysis?
iii. What aspects of the moderators pertained to this particular study?
iv. How can the relationship be conceptualised in view of the moderator variables introduced?

Table 6.5 shows the number of mentions of the variables as moderators by the participants with personality having been mentioned by all 7 participants and emotional intelligence by 6 participants.

TABLE 6.5: Moderator variables analysis of mentions

Identified Moderator	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Participant 7	Count
Emotional intelligence	x		x	x	x	x	x	6
Personality	x	x	x	x	x	x	x	7

Below is a discussion of the two variables in the context of the questions posed above as guided by existing literature.

6.2.3.1 *Emotional intelligence*

The construct of emotional intelligence (EI) came to light in the 1990s and was seen to be analogous with general intelligence, that is, one's cognitive abilities and intellectual capacity. Emotional intelligence can be defined as the "ability to express one's emotions, understand one's own and others' emotions, regulate one's own emotions and manage emotions of others" (Kant, 2014: 5). Early studies on emotional intelligence were done by Salovey and Mayer (1990: 189), who express on the need to use emotional intelligence to "guide one's thinking and actions". The authors argue that people who score high in emotional intelligence have the ability to decipher their own emotions as well as those of others and hence can regulate emotions in themselves. The two distinct streams of emotional intelligence are "trait" and "ability" (O'Connor, Hill, Kaya & Martin, 2019).

The scholars explain that trait emotional intelligence as a construct measures one's typical behaviour in emotion-relevant situations, for example, in stressful situations, whereas ability emotional intelligence is more of the theoretical understanding of emotions. Petrides and Furnham (2000) gave a more prose form explanation of trait emotional intelligence positing that it relates to the stable and consistent emotional abilities or aspects of an individual. The authors highlight that these are the more enduring emotional competencies rather than the situational or environmental specific ones. Trait-based emotional intelligence measures were found to be more ideal for this study, as they focus more on typical behaviour and thus are better predictors of human behaviour in different situations (Petrides & Furnham, 2000). In addition, recent meta-analysis has found trait emotional intelligence to be positively correlated with job performance (O'Boyle, Humphrey, Pollack, Hawver & Story, 2011). The sub-dimensions of trait emotional intelligence are self-awareness of emotions, awareness of emotions in others, regulation of emotions in self and utilisation of emotions (O'Connor et al., 2019).

For this study, two sub-variables were found to be applicable as they relate to the self, which is in line with the study's ontology of subjectivism. The two sub-variables of emotional intelligence to be considered were regulation of emotions in self and self-awareness of emotions.

Below are some of the extracts from the participants that necessitated the inclusion of emotional intelligence as a moderator in this study.

> '*The only challenge that arises is … certain people may not be aware that they are predisposed, you know, to act in an irrational manner or the extent to which decisions that they make or statements that they utter may negatively impact on other people… so for psychologists the issue is really about awareness.'*
>
> *'Where does emotional intelligence fall into that because I understand it's an area of very much interest…one of the pillars is self-awareness.'* **Participant 4**

Participant 4 highlighted that emotional intelligence was a very important variable in the equation as it would predict the level of unbounded irrationality and hence regulation of one's personality, attitude and ultimately behaviour.

> *'… the level of self-development, the level of self-awareness of the individual. Because if you are more aware, they will be able to pick up that no, this is not the right [decision].'* **Participant 5**
>
> *'… but in certain personalities and stuff, these people… cannot self-regulate.'* **Participant 3**

6.2.3.2 *Personality*

Participants believed that personality had some moderating influence on decision-making. Personality has been defined as a predictor of one's behaviour in a given situation (Best & Kahan, 2014). Another definition is that; it is an abstract concept that encompasses actions, habits, traits, characteristics, emotions and identification of oneself with one's environment which remain unchanged in normal conditions (Kant, 2014). It is often argued that the difference between personalities and attitudes is that personalities remain relatively stable over very long periods.

Arguably, the most discussed and recognised model of personality is the Big 5 model. The Big 5 personality theory was developed by D.W. Fiske (1949) and later extended on by other theorists like Norman (1967) and Goldberg (1981; 2014). The development of the Big 5 personality traits followed Gordon Alport's discovery of over 4000 traits which were seen to be too complicated. The Big 5 model is based on five personality dimensions or traits: neuroticism, extraversion, openness to new experiences, agreeableness and conscientiousness.

Below are some of the verbatim quotations supporting the inclusion of personality in the framework.

> ‘… *unfortunately, now, there is the issue related to personality…’* **Participant 4**

> *‘… maybe again personality. If I can take it to the psychology side of it...freestyle, for instance, someone who actually is not constrained by boundaries…while a typical, let's say introvert with always [be] cautious and follow rules and [is] agreeable for instance, [he] would not use that unbounded irrationality side of it...’* **Participant 2**

> *‘I would say again…depends on the person, their personality*.’ **Participant 3**

Participant 4 further explained the influence of personality on behaviour:

> *‘If somebody is low on openness [to new experiences] then they are likely to use their emotions in order to feed into the decision matrix...if somebody is high in neuroticism, then they are likely to delve into irrationality.’* **Participant 4**

Low openness to new experiences means being guided by gut feeling. The opposite is true as the role or the extent of influence of personality on decision-making is guided by how much of each personality trait one has.

> *‘All forward looking organisations right now, both for recruitment and selection and for promotion are now including psychometric assessments particularly personality assessments as part of the battery of measures in understanding the person… personality is what drives behaviour.’* **Participant 4**

The participant explained that the fact that someone is cognitively talented i.e., general mental ability, does not automatically translate into the supposition that someone is a good manager.

For this study, the particular personality trait of interest is neuroticism, as deduced from interviews with subject matter experts. Participant 4 indicated that for higher levels the two dimensions of neuroticism and conscientiousness were applicable, while Participant 7 singled out neuroticism. For this study conscientiousness was dropped as it is akin to emotional stability, which was included in the framework. Neuroticism as a construct can indicate emotional instability (Kemarat, Theanthong, Yeemin & Suwankan, 2022) as well as negative affectivity like tension and anxiety, which also affect human rationality in decision-making.

In line with the above deductions and the prior discussion on unbounded irrationality, cognitive biases due to neurotic personality do affect one's decision-making – the more neurotic, the more unboundedly irrational.

The taxonomic analysis ensues.

6.2.4 Individual Risk attitude and unbounded irrationality: A taxonomic analysis

Participants were asked, based on their expertise and experience, whether they thought there was a link between individual risk attitude and unbounded irrationality. All the participants responded in the positive that the link was undeniable. Participant 4 went on to explain that it was a congenital relationship in that it could be the result of nature and/or the environment, with natural dispositions or learnt behaviours. Other participants had the following to say pertaining to the relationship between the variables:

> *'If you have like a person, that has …naturally, that high potential for risk taking. I don't think anything can stop them.'* ***Participant 6***
>
> *'… our desires. I think self-preservation again…knowing that there is no negative consequence for engaging in the risky behaviour.'* ***Participant 6***
>
> *'…people are driven by their needs.'* ***Participant 5***
>
> *'I think there is a link because if you look at the unbounded irrationality, it shows that you do think there's no structure, there's nothing, you know, it's like an automated* [automatic] *thing that just happened…'* ***Participant 5***

Figure 6.1 below shows the taxonomic analysis of the study variables illustrating the resultant relationships as informed by literature review in Chapter 3 and this qualitative enquiry.

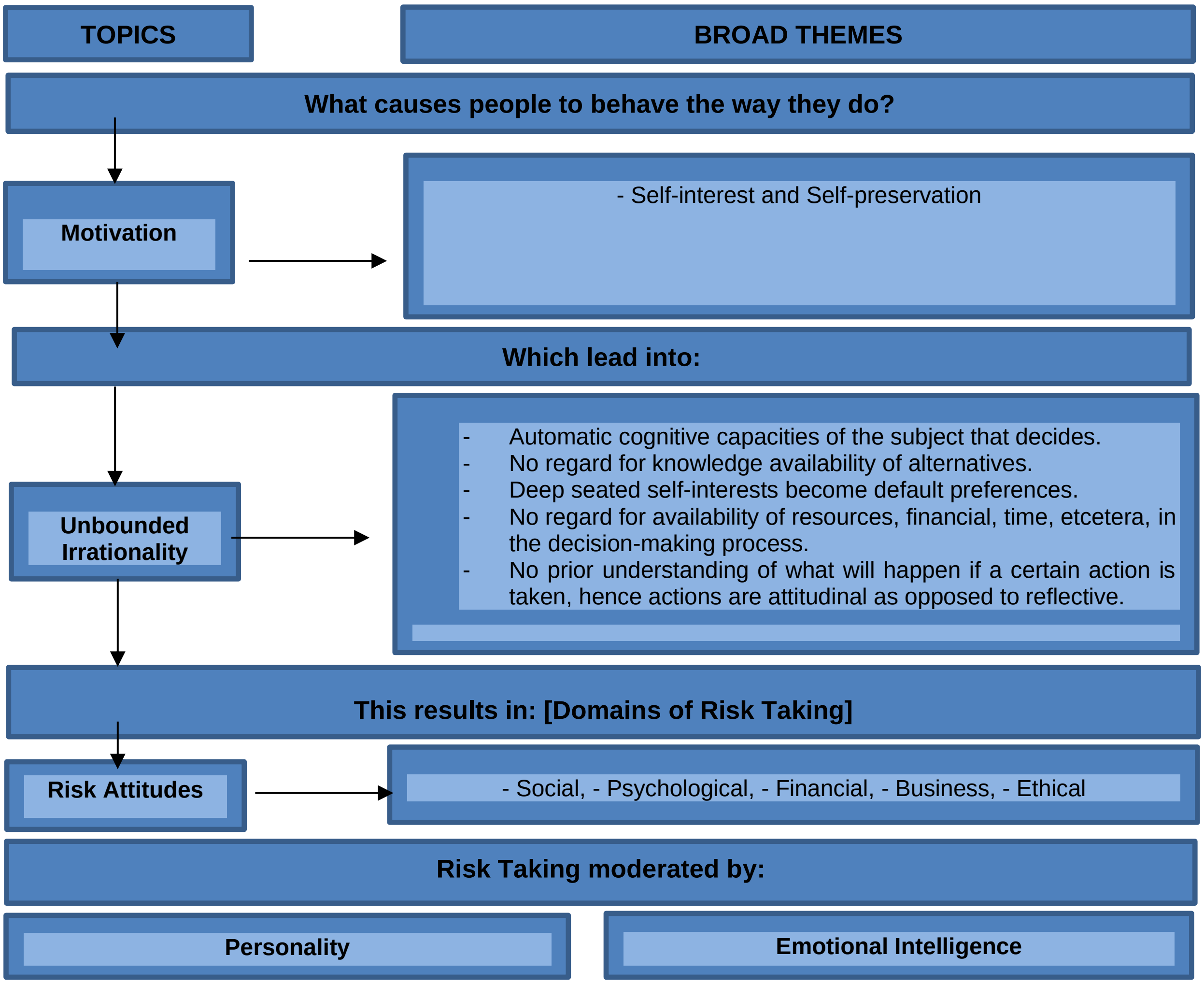

FIGURE 6.1: Taxonomic analysis of the study's psychological variables

The next section is on the construction of the corporate governance–firm performance framework thus far as informed by the analysis in this chapter.

6.3 CORPORATE GOVERNANCE–FIRM PERFORMANCE CONCEPTUAL FRAMEWORK

A significant number of studies have reported some form of correlation between emotional intelligence and the Big 5 personality traits (Petrides, 2010; Noorbakhsh, Besharat & Zarei, 2010; Saklofske, Austin & Minski, 2003). Kant (2014) claims that emotional intelligence has become one of the key factors for the development of personality. Kumar, Mishra, Saxena, Singh, Kumar and Yannjana (2020) narrow it down to neuroticism, reporting a negative correlation between emotional intelligence and the personality trait of neuroticism.

The evidence from literature as well as subject matter experts' views supporting this relationship culminated in the formulation of a moderated-moderated mediation framework as shown in Figure 6.2.

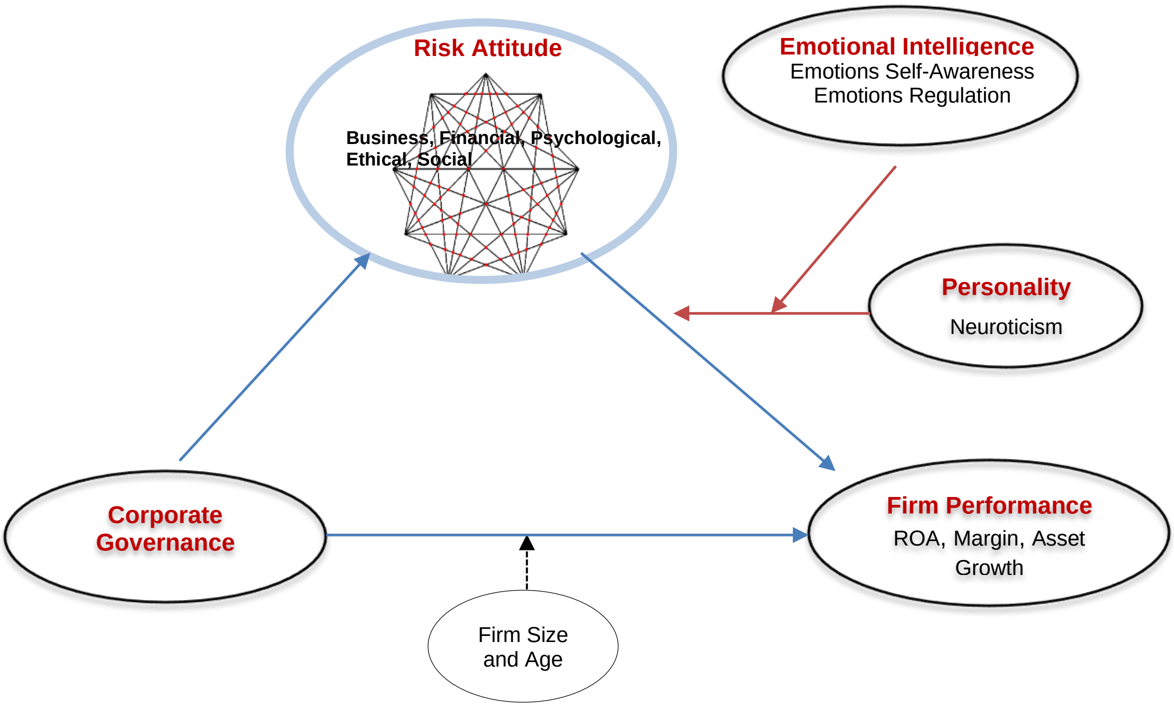

FIGURE 6.2: Moderated-moderated mediated framework for corporate governance–firm performance

The discussions with the subject matter experts concluded that emotional intelligence moderated neuroticism, which in turn moderated individual risk attitude. In the absence of measuring the "conscientiousness" personality trait, which is akin to emotional stability, emotional intelligence may be considered to regulate the "emotional instability", i.e., neuroticism, which manifests in feelings of anxiety, anger and stress. The degree to which one succumbs to neuroticism, therefore, will depend on the levels of emotional intelligence one possesses. In the same vein, the degree to which the outcome – firm performance – is influenced by individual risk attitude is dependent on the level of interaction between individual risk attitude and personality.

The approach taken in the study, therefore, was to explain how individual risk attitude influenced decision-making given one's psychological disposition towards neurotic behaviour as moderated by the ability to decipher and regulate one's emotions.

6.4 SELECTION OF SURVEY INSTRUMENT

The instruments selected satisfy the following aspects pertinent to answering the research questions of this study:

i. The instruments best fit the measured variable of individual risk attitude as measured through self-reporting.
ii. Questions in the instruments are comprehensive and span several domains of life/risk, hence do not assume generalised risk taking.
iii. The instruments have an approach to risk that resonates well with everyday thinking and is thus likely to be easily understood.
iv. The instruments view risk attitude or propensity as subjective, which is in line with the ontology of this study.
v. The instruments have high reliability and validity estimates.

The directory of risk attitude measurement instruments is discussed next.

6.4.1 Measurement of individual risk attitude

Appelt, Milch, Handgraaf and Weber (2011) compiled a directory of decision-making individual differences (DMIDI) which also included measures or instruments for risk attitude. The DMIDI is an inventory of over 200 individual difference measures frequently employed in behavioural and decision-making research. The risk attitude instruments use self-report questionnaires designed to ask individuals about risky situations. The measures shown in Table 6.6 were extracted from the DMIDI inventory (Risk attitude measures, n.d.).

TABLE 6.6: Decision-making individual differences inventory – risk attitude instruments

Name of risk attitude instrument	Source
Attitudes to Risk Taking	Grol et al. (1990)
Business Risk Propensity Scale (BRPS)	Sitkin and Weingart (1995)

Name of risk attitude instrument	Source
Choice Dilemmas Questionnaire (CDQ)	Kogan and Wallach (1964)
Cognitive Appraisal of Risky Events (CARE and CARE-Revised)	Fromme et al. (1997)
Domain Specific Risk Attitude (DoSpeRT)	Weber et al. (2002)
Evaluation of Risk Scale (EVAR)	Sicard et al. (1999)
General_Risk_Propensity_Scale (GRiPS)	Zhang, Highhouse and Nye (2018)
Passive Risk Taking Scale (PRT)	Keinan and Bereby-Meyer (2012)
Risk Avoidance Scale (RAS)	Shure and Meeker (1967)
Risk Propensity Scale / Risk-taking Index (RTI)	Nicholson et al. (2005)
Risk-taking Propensity	Jackson et al. (1971; 1972)
Risk-taking Propensity Measures	MacCrimmon and Wehrung (1985)
Safe Asset vs. Risky Task (SAVR)	Kramer and Weber (2012)
Stimulating-Instrumental Risk Inventory	Zaleskiewicz (2001)
Attitudes Towards Risks Questionnaire (ATRQ)	Franken, Gibson and Rowland (1992)

Source: Appelt et al. (2011)

The study selected two instruments from the decision-making individual differences inventory, the DOSPERT (Domain Specific Risk Attitude) by Weber and Blais (2006) and the General Risk-taking scale by Hung, Tangpong and Li (2012). From the DOSPERT, the domains of social, psychological and ethical were selected with the domains of financial and business selected from the General Risk-taking scale. Each instrument's relevance, scope, reliability and validity, as reported by the developers or other previous scholars, are detailed below.

i. DOSPERT (Blais & Weber, 2006)

The DOSPERT Scale was developed by Blais and Weber (2006), being a revision of the original by Weber, Blais and Betz (2002) designed for the teenage population. The revision was prompted by the need to accommodate a broader range of ages, cultures and educational levels and also to generate a short version. The revised version of the scale is composed of "items that would be interpretable by a wider range of respondents in different cultures" (Blais and Weber (2006: 1). The 30-item version of the DOSPERT scale evaluates behavioural intentions and individuals' gut level assessment of the riskiness of an activity. The higher scores indicate greater risk taking in the domain of the subscale.

The reliability estimates associated with the original 48-item scale ranged from .70 to .84 with a mean (α) of .78 (Weber et al., 2002). Test-retest reliability estimates of the original scale were moderate and provided "evidence for the factorial and convergent/discriminant validity of the scores with respect to constructs such as sensation seeking, dispositional risk taking, intolerance for ambiguity, and social desirability" (Weber et al., 2002: 1). A total of 12 statements were selected and adapted for this study.

ii. General Risk Propensity scale (Hung, Tangpong & Li, 2012)

The General Risk Propensity scale adopted for this study was an 8-item scale developed by Hung, Tangpong, Li and Li (2012) extending on the original 5-item scale by Hung and Tangpong (2010). This scale was developed for the measurement of risk attitude amongst business practitioners consistent with the particular population targeted for this study. The 8-item scale was split into the two dimensions of business and financial.

The scale's validity as measured by the Cronbach's alpha based on experienced business professionals in the United States was .76. Confirmatory analysis was performed to assess the goodness of fit of the 8 items in the same study and was found to be 0.97. These results indicate that the scale has a good degree of reliability.

6.4.2 Measurement of personality – neuroticism

The IPIP 50 is a self-report test intended to measure the Big 5 personality traits. The test or scale was developed by Goldberg (1999) from the International Personality Item Pool. For this study neuroticism, which has 10 items on the subscale, was used to measure personality. IPIP 50 has been reported to have adequate psychometric properties across ages from young adults to adults, which correlates well with the population chosen for this study.

Reliability as measured using Cronbach's alpha was above 0.7 as reported in a study employing 454 respondents by Szostek (2021). For convergence validity, the scale had correlations that ranged from .85 to .92 with the NEO-PI-R version of the same constructs. Many validation studies were conducted and supported the construct formation – Buchanan, Johnson and Goldberg (2005) with 2,448 participants and Lamers, Westerhof, Kovács and Bohlmeijer (2012) with 1161, amongst others.

6.4.3 Measurement of emotional intelligence

The Assessing Emotions Scale, also known as the Self-report Emotional Intelligence Test (SREIT) was developed in 1998 by Schutte, Malouff, Hall, Haggerty, Cooper, Golden and Dornheim based on Salovey and Mayer's (1990) model. The 33-item scale was derived from a factor analysis of the original 62-item scale using a sample of 346 participants. This scale has been cited in over 3000 articles and has thus been found by many to be one of the best measures of emotional intelligence. The scale has four factors, i.e., regulation of emotions, appraisal of emotions (self-awareness of emotions), social skills and utilization of emotions, that are responded to on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Internal consistency for this scale, as determined by the 346-participant sample in the research of Schutte et al. (1998), was .90 as measured by Cronbach's alpha. Many other researchers using this 33-item scale in different cultural environments reported a mean alpha of .87 across studies. Test-retest reliability as reported by Schutte et al. (1998) was .78 for all four subscales. The scale was found to have good convergence validity with other scales of emotional functioning (Brackett & Mayer, 2003).

For this study the two subscales of self-regulation of emotions and self-awareness of emotions were considered in line with the ontology of the study. The selection was borrowed from Moon (2021), who also employed just the two scales in a similar study investigating the effect of risk attitude and emotional intelligence in decision-making.

6.4.4 Measurement of corporate governance

The corporate governance measures would be informed by the principles set out in the King IV Code of Corporate Governance (2016). The purpose of the principles, in 0Professor Mervyn King's words, "is to make corporate governance more accessible and relevant to a wider range of organisations, and to be the catalyst for a shift from a compliance-based mindset to one that sees corporate governance as a lever for value creation" (IoDSA, 2016).

The principles have four governance outcomes, as explained in Chapter 2: ethical leadership, good performance, effective control and legitimacy. Six King IV practice recommendations for selected principles were consolidated to come up with the instrument for measuring corporate governance practices in organisations. The practice recommendations chosen are in line with most scholars' corporate governance enquiries, as discussed in section 2.3 of Chapter 2. The practice recommendations are board size, board independence, CEO duality, board activity, CEO compensation mix and CEO tenure.

Corporate governance was measured on a three-year average, consistent with firm performance. Statistics need to be compiled over a period of three years on average as to curb the effects of short- term fluctuations (Smith, 2010). Smith (2010) explains that using 'three-year average' is a common approach used by researchers as it enhances the robustness and reliability of performance measures over time giving a stable representation of the company performance, in this context, interms of governance and profitability. The three-year average smoothens the impact of random fluctuations in financial performance thereby giving a clear picture of the underlying trends (Patel & Lee, 2017).

The application of the 'three-year average' was consistent with a number of other earlier studies that assessed firm performance and corporate governance. Azeez (2015), in the Sri Lankian context, considered data from 2010 to 2012; Aggarwal (2013) studying the same relationship in India considered 2010 to 2012 with Buallay et al., (2017) looking at data from 2012 to 2014 in Saudi Arabia.

6.4.5 Measurement of firm performance

Venkatraman and Ramanujam (1986) postulated that business performance can be solicited either through primary means, which is questionnaire survey based or secondary, which is published data. For firm performance in this study, consideration was given to a modified version of the perception-based profitability performance measurement scale of Spanos and Lioukas (2001). The scale has been employed by other scholars in measuring firm performance to include Fandel et al. (2004) and Rivard et al. (2005).

The use of perception-based measures was necessitated by the following: -

(i) The general absence of accounting information in the public domain pertaining to most ‘for profit making’ companies, particularly non-listed companies, as the study was not limited to listed companies for a wider coverage.

(ii) All Zimbabwean audited financial statements i.e., for financial year 2018 onwards, from which observed data is objectively drawn were ‘qualified’, hence not representative of actual performance. This was crucial as the study drew its population mostly from Zimbabwe and South Africa.

A qualified audit opinion is issued when the audited financial statements “are materially misstated, or, in the case of an inability to obtain sufficient appropriate audit evidence, may be misstated” (ISA 705:2). All the companies in Zimbabwe reporting in the Zimbabwean dollar (ZWL) as the functional currency were qualified on the basis of noncompliance to IAS 8 - Accounting Policies, Changes in Accounting Estimates and Errors, IAS 21 - The Effects of Changes in Foreign Exchange Rates and IFRS 13 - Fair Value Measurement, IAS 29 - Financial Reporting in Hyperinflationary Economies amongst other accounting standards affected by currency conversion where the Reserve Bank of Zimbabwe gazzeted exchange rates did not comply with the standards.

The following extracts are examples of the basis of qualification of financial statements as taken from the respective organisations’ Annual Reports.

> *“… the conversion to ZWL, for purposes of reporting in the Group’s functional currency, is not in compliance with International Financial Reporting Standard… Consequently, we were unable to obtain sufficient evidence to support the appropriateness of the valuation in ZWL … balances…” (Econet Wireless Annual Report, 2021:121)*

> *“In our opinion … the accompanying inflation adjusted financial statements do not present fairly the financial position of the Company as at 31 December 2021… the foreign currency denominated transactions and balances were translated into ZWL using the official interbank exchange rate which is not considered an appropriate spot rate for transactions as required by IAS 21.” (ZCDC Annual Report, 2021:33)*

“Basis for Adverse Conclusion. Non-compliance with International Accounting Standard (IAS) IAS 21- The Effects of Changes in Foreign Exchange Rates and IAS 8 - Accounting Polices, Changes in Accounting Estimates and Errors… Exchange rate used in the prior year and current year Effective 1 August 2020 – 30 September 2022…” Delta Beverages Corporation, Annual Report, 2020:3)

(iii) The Zimbabwean economy being a hyperinflationary economic environment tends to have accounting matrices that cannot ordinarily be compared to other environments included in the study, such as South Africa and Namibia, for purposes of determining firm performance.

Venkatraman and Ramanujam (1986 :10) examined the degree of convergence between objective and subjective firm measures and found that there was a “strong degree of convergence between the two methods”. Dess and Robinson (1984) who also tested the same convergence validity in their research “Measuring organizational performance in the absence of objective measures” found the data to be corresponding which is consistent with Venkatraman and Ramanujam (1986). Perceptual measures allow for the data to be collected in the form and format that is desired for the specific study (Phillips, 1981; Venkatraman & Ramanujam, 1986). The study required data on firm performance against a firm’s closest competitor which information can be based on perception.

Spanos and Lioukas’s (2001) scale has a three-construct profitability measure which covers ROE, profit margin and net profit. However, as two of the matrices, profit margin and net profit, were basically the same, this study replaced net profit with ROA; this decision was informed by most studies of similar investigations, as discussed previously in section 2.3 of Chapter 2. It also replaced ROE with asset growth to encompass other areas of firm performance. The profitability statistics compiled covered a period of three years on average so as to curb the effects of firm performance variability as outlined in the discussion of corporate governance measures under section 6.4.4.

Firm performance was measured using a 5-point Likert scale. Value 1 suggests “far below average” and 5 “far above average” relative to a firm’s closest competitor. The performance metrics were determined by the general 3-year average to avoid bias due to temporal fluctuations and to objectively approximate sustained profitability.

6.5 SURVEY INSTRUMENT FOR THE CORPORATE GOVERNANCE-FIRM PERFORMANCE FRAMEWORK

Adapted existing scales were combined into one for the measurement of corporate governance, firm performance, individual risk attitude, emotional intelligence and neuroticism. The combined instrument had a total of 54 statements including demographics. Table 6.7 below shows the structure of the questionnaire.

TABLE 6.7: Survey instrument items

Item number	Construct/variable measured	Measurement instrument	Adopted/adapted
1-7	Criterion	N/A	N/A
8-14	Demographics	N/A	N/A
15-17	Firm performance *(Three-year average)*	Spanos and Lioukas (2001)	Adapted to remove one of the statements measuring the same construct
18-23	Corporate governance	King IV and literature review	N/A
24-34	Individual risk attitude	DOSPERT (Blais & Weber, 2003) General Risk Propensity (Hung et al., 2012)	Adapted the statements to suit the population, context and business environment as given by subject matter experts
35-44	Personality – neuroticism	IPIP 50 – Neuroticism (Goldberg, 1995)	Adapted, made small changes to suit the cultural context
45-54	Emotional intelligence regulation of emotions & self-awareness of own emotions	Schutte et al. (1995)	Adapted, made small changes to suit the cultural context

The chapter concludes with a summary.

6.6 SUMMARY

The aim of this chapter was to establish the description of unbounded irrationality and select and subsequently adapt a survey instrument for quantitatively testing the subject matter expert informed corporate governance–firm performance framework. The chapter discussed the concepts of unbounded irrationality and individual risk attitude as viewed by subject matter experts, culminating in a taxonomic analysis of the concepts.

Survey instruments for the different aspects noted in the analysis of the qualitative enquiry with the right psychometric properties were selected and adapted to suit the particular population of managers in the SADC region, represented by Zimbabwe and South Africa. The next chapter discusses the results of the quantitative enquiry.

7 CHAPTER 7: RESULTS OF THE QUANTITATIVE ENQUIRY

7.1 INTRODUCTION

The aim of this study was to explore the nature of the relationship between corporate governance and firm performance with a view to proffer a framework that recognises the unbounded irrationality of individual risk attitudes of managers in decision making under risk and uncertainty. In this chapter, the last two research questions are addressed based on the results of the quantitative enquiry. The results of this enquiry culminate in the final framework for corporate governance and firm performance which takes into consideration the specific psychological element of individual risk attitude involved in managerial decision-making.

The empirical research questions guiding this data enquiry were:

EQ 4: What are the individual risk attitude domains relevant to managerial employees as informed by a quantitative enquiry?

EQ 5: To what extent is the corporate governance–firm performance relationship mediated by the individual risk attitude of those charged with managing corporates?

EQ 6: How may a framework for the corporate governance–firm performance relationship which integrates individual risk attitude best be described?

7.2 RESEARCH METHOD

7.2.1 Sample

The study received 230 responses which were then cleaned in accordance with the criteria specified in Chapter 5 to arrive at a sample of (N = 161) employees drawn from Zimbabwe (117) and South Africa (44). The usable data was therefore 70% of the responses as the population was largely ACCA members of which some did not suit the inclusion criteria. Inconsistencies in data provided by some respondents indicating that their company was in the SME sector at the same time listed on the stock exchange market, necessitated the inclusion of nine other respondents as requirements for good corporate governance would apply.

A non-random probability sampling method was used to collect data from employees in the various sectors of the economy. The sampled employees were predominantly in Mining, Metals, Energy and Oils (60), Financial Services and Insurance (39), Manufacturing (14) and Fast-moving Consumer Goods (FMCG) (12); the rest were from other sectors. Table 7.1 reproduces the sample profile for analysis.

TABLE 7.1: Sample profile

Variable	Frequency	(%)
Gender		
Female	42	26.1
Male	119	73.9
Age of participants		
Below 30	17	10.6
30-40	82	50.9
40 plus	62	38.5
Education		
Diploma/certificate	6	3.7
Undergraduate degree	42	26.1
Master’s degree	111	68.9
PhD/Doctoral degree	2	1.2
Role		
Executive/senior management	54	33.5
Middle management	78	48.4
Junior management	29	18.0
Number of employees in firm		
Less than 100	15	9.3
100-500	31	19.3
500 plus	115	71.4
Number of years of firm’s existence		
3-<5	6	3.7
5-10	34	21.1
10 plus	121	75.2

Table 7.1 (sample profile) refers:

Gender analysis - The sample comprised 26% females and 74% males, confirming prior studies on women in leadership that found the ratio of women to men in leadership positions to be very low. Gillard and Okonjo-Iweala (2022) report that in 2020 fewer than

7% of countries had female heads of state. Keohane (2020) maintains that women face formidable obstacles in the form of stereotyping, lack of support and poor family-friendly work policies, hindering them from advancing their careers. The effects of these gender ratios are examined further later on in the chapter.

Age analysis - Employees in the fewer than 30 years, 30 to 40 years and more than 40 years age groups were 17 (10.6%), 82 (50.9%) and 62 (38.5%) respectively. It is assumed that that the older one gets the more mature one becomes, especially in respect of being emotionally aware and able to regulate emotions. The supposition will be confirmed in the study.

Role analysis - Employees in executive senior management, middle management and junior management were 54 (33%), 78 (48%) and 29 (18%) respectively. The fact that most of the respondents were in middle management to senior management (81.9%) bodes well for the findings, because this group more often than not needs to make immediate managerial decisions in uncertain circumstances.

Education analysis – In the sample 70% of the respondents held at least a master's degree, meaning that literacy would not be a factor affecting the reliability of information provided. The profile of the respondents was a good fit for this analysis at face value, as the sample was highly educated and of suitable seniority to provide the data required.

Tenure analysis – Table 7.1 shows that, in terms of work tenure, the sample comprised 75.2% with more than 10 years, 21.1% with 5-10 years in the same company and just 3.7% with 3-< 5 years in the same company. As most respondents had more than 10 years' tenure (75.2%), it can be inferred that the sample had high information power which enhances reliability and validity due to lengthy exposure to the same company.

7.3 DATA ANALYSIS

The data was analysed through quantitative techniques. Sekaran and Bougie (2016) point out that before analysing the data there is a need to ensure that the data are accurate, complete and appropriate for further analysis. This section addresses the issues of data coding, analysis of outliers, tests of normality, reliability and validity.

Reliability and dimensionality of the constructs measured by the scales were analysed through item analysis and exploratory factor analysis (EFA). SPSS version 25 was used in performing the analysis. Moderated mediation conditional analysis was conducted to determine the fit of the hypothesised model. Amos version 23 and Hayes PROCESS model version 3 were employed in carrying out the model fit analyses.

Missing values

There were no issues of missing values in this study as the survey was conducted online.

Reliability

Cronbach's alpha was used to assess the internal consistency of the items making up each scale (Cronbach,1951). This involves analysing the items in terms of how they relate to the subscale score. Items that are unrelated or relate poorly with the subscale are dropped from further analysis. Pallant (2010) recommends eliminating items that have an item-total correlation of 0.3 or less. In this study, items with less than 0.3 item-total correlation were eliminated from further analysis. Hair, Hult, Ringle, Sarstedt, Danks and Ray (2021) give guidelines for the quality levels of scale reliability: 0.70 is the minimum acceptable level and 0.95 is the maximum to curb for indicator redundancy with 0.80 to 0.90 as the recommended level. These levels were used in the study to assess the quality of the levels of reliability of the scales and subscales.

Factor analysis

The purpose of exploratory factor analysis is to assess the uni-dimensionality of each subscale and remove those items with poor factor loadings (Mahembe, 2010). Convergent validity was determined using the average variance extracted (AVE). AVE assesses the degree of confidence that the items in a scale are measuring well the construct in question (Campbell & Fiske, 1959). It measures the level of variance captured in a construct against the level due to measurement error. Hair et al.'s (2021) criterion of acceptable level of 0.50 AVE was used in this study.

The following rules were used to determine the number of factors to be extracted and the items to be included in each factor.

i. Factors had to have Eigen values greater than one (Kaiser, 1967 in Mahembe, 2010).
ii. Items loading less than 0.3 on any factor were excluded (Field, 2018).

iii. Items with factor loadings greater than 0.3 cross-loading onto more than one factor were also excluded.

iv. A Kaiser-Meyer-Olkin measure of sampling adequacy (KMO index) greater than 0.5 (Kaiser & Rice, 1974 in Field, 2018) was chosen as the cut-off point. The KMO index values closer to one indicate the pattern of correlations is relatively compact and can yield distinct and reliable factors (Field, 2018).

v. Bartlett's test of sphericity had to be significant at the 0.05 level.

After having established the factorial validity of the scales and subscales and their reliability, moderated-moderated mediation analysis was carried out using Hayes PROCESS version 3; Amos version 23 was employed to confirm the path model.

7.3.1 Reliability of measuring scales

According to Hair et al. (2021), reliability statistics of 0.70 and above are good. Table 7.2 shows the reliability output for firm performance, corporate governance, the revised risk scale, neuroticism and emotional intelligence.

TABLE 7.2: Reliability analysis output for the studied constructs' scales

Construct	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Firm performance	Profit margin	7.48	3.926	.742	.575	.803
	Asset growth	7.65	3.680	.788	.627	.758
	ROA	7.61	4.165	.687	.479	.852
	Overall internal consistency Cronbach **(α)**					**0.86**
Corporate governance	cg1	19.66	14.926	.539	.321	.744
	cg2	20.24	11.610	.585	.357	.720
	cg3	19.67	12.572	.460	.313	.758
	cg4	19.61	14.213	.639	.426	.725
	cg5	20.07	13.119	.502	.363	.741
	cg6	20.02	12.687	.521	.319	.737
	Overall internal consistency Cronbach **(α)**					**0.77**

Construct	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Individual risk attitude/ Risk Attitude	risk1	19.40	18.416	.436	.291	.745
	risk2	20.45	15.749	.467	.268	.740
	risk5	19.55	16.086	.606	.425	.709
	risk8	19.91	16.285	.554	.349	.719
	risk3	20.90	17.265	.413	.279	.748
	risk6	20.61	16.576	.434	.276	.745
	risk16	19.97	16.105	.501	.304	.729
	Overall internal consistency Cronbach **(α)**					**0.86**
Neuroticism	p1	20.88	24.947	.547	.370	.761
	p2	20.81	27.678	.312	.167	.790
	p3	19.98	25.318	.454	.284	.774
	p4	20.22	31.250	-.029	.031	.828
	p5	20.84	25.557	.548	.380	.761
	p6	20.97	24.818	.652	.527	.748
	p7	21.11	26.400	.559	.492	.762
	p8	21.33	26.060	.614	.550	.757
	p9	21.11	25.308	.629	.511	.752
	p10	20.92	26.887	.445	.292	.774
	Overall internal consistency Cronbach **(α)**					**0.83**
Emotional intelligence	emot1	33.43	11.659	.639	.529	.825
	emot2	33.37	11.746	.674	.706	.823
	emot3	33.39	11.613	.666	.683	.823
	emot4	33.32	11.520	.552	.459	.834
	emot5	33.42	11.144	.574	.499	.832
	emot6	33.34	11.249	.565	.363	.833
	emot7	33.13	12.102	.481	.347	.840
	emot8	33.14	12.136	.500	.382	.838
	emot9	33.20	12.085	.488	.356	.840
	Overall internal consistency Cronbach **(α)**					**0.85**

Firm performance - The obtained Cronbach's alpha (α) for the Firm performance scale was 0.86., which is acceptable. The corrected item-total correlations in Table 7.2

indicate all the values are acceptable as they exceeded the 0.30 level (Field 2018). All three items were retained.

Corporate governance - The obtained Cronbach's alpha was 0.77. The corrected item-total correlations were above 0.30 and no items could be deleted to improve the reliability. All items were retained for further analysis.

Individual risk attitude – Individual risk attitude was measured by five subscales. Each subscale was made up of four items. Risk subscales were initially analysed separately. However, the objective of the study was to measure the composite risk attitude and therefore all the reliable subscale items, including the items comprising the questionable social and psychological subscales, were analysed as one scale. The overall internal consistency Cronbach α for the risk scale was 0.70, just meeting the acceptable minimum level of reliability.

Ten (10) items fell below the acceptable criterion level of 0.30 for item-total score correlations. These were items risk7, risk9, risk10, risk11, risk12, risk14, risk15, risk18, risk19 and risk21. When these items were removed, the risk scale reliability rose to 0.76 with all item-total score correlations above the acceptable minimum criterion level of 0.30. These items were risk1, risk2, risk3, risk5, risk6, risk8, risk16, which formed the revised 7-item risk scale. Inspection of these items revealed that the new scale largely comprised financial and business risk subscales.

Neuroticism - Neuroticism had an internal consistency coefficient Cronbach α of 0.79. Inspection of the item-total score correlations in Table 7.2 shows that item p4 had item-total score correlations below the acceptable level of 0.30. These were removed and the reliability of the scale improved to 0.83.

Emotional intelligence - The emotional intelligence scale had two subscales, one measuring emotional awareness and the other emotional regulation. The emotional awareness subscale had an internal consistency Cronbach α reliability of 0.77, which was above the acceptable level of 0.70. All the item-total correlations were above the recommended level of 0.30. However, removing item emot10 would increase the reliability to 0.82. Item emot10 was then excluded from further analysis.

The obtained internal consistency Cronbach α reliability of 0.73 for the emotion regulation scale was above the acceptable level of 0.70. All the items had item-total score correlations above the recommended level of 0.30. All items were considered for further analysis.

The reliable items from both the emotional awareness subscale and emotional regulation subscale were combined to form one emotional intelligence scale. This scale had an internal consistency Cronbach α reliability of 0.85. All the items met the criterion level of acceptable item-total score correlation of 0.30.

7.3.2 Dimensionality analysis

This section presents the results of exploratory factor analysis (EFA) and average variance extracted (AVE) of the scales used in this study. The Kaiser-Meyer-Olkin and Bartlett’s test of sphericity tested the suitability of the data for factor analysis.

Dimensionality analysis of the Firm performance scale

A Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value was .72, and Bartlett's Test of Sphericity test statistic value was 230.00 (df = 3; p = 0.00). According to Kaiser (Field, 2018), these values are good for factor analysis. Kaiser recommends acceptance of KMO values greater than .50 as acceptable, values between .50 and .70 as mediocre and values between .70 and .80 as good, while values between .80 and .90 are great and values more than .90 are superb. All the items loaded onto one factor with substantial loadings greater than 0.50. This suggests that the factor solution provides an explanation for the observed inter-item correlation matrix.

The average variance extracted (AVE) is “a measure of the amount of variance due to measurement error” (Dos Santos & Cirillo, 2021). The AVE was 0.78, which far exceeds Hair et al.’s (2021) criterion of acceptable level of 0.50 AVE, indicating that the items in the scale measured well the construct of firm performance.

Dimensionality of the Corporate governance scale

For the Corporate governance scale, the obtained Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value was .81 and Bartlett's Test of Sphericity test statistic value was 255.63 (df = 15; p = 0.00). This indicates that the factorability of the scale was good. All items loaded onto one factor. The total variance explained was 49.59%. Inspection of the communalities indicated that item cg3 had lower than the recommended value of 0.40. When it was dropped from the analysis, the total variance extracted rose to 53.48 percent or an AVE of 0.53, which is above the minimum recommended level of 0.50 (Hair et al., 2021).

Dimensionality of the Revised risk scale

The revised risk scale obtained a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value of .79, and Bartlett's Test of Sphericity test statistic value was 255.29 (df = 21; $p = 0.00$), which allowed for the identity matrix null hypothesis to be rejected. According to Kaiser (Field, 2018), these values are good and indicate the factor analysability of the revised risk scale. There was, therefore, strong evidence that the correlation matrix was factor analysable. Two factors emerged, corresponding to the financial risk subscale and the business risk subscale. As shown in Table 7.2, all the items of the revised risk scale had factor loadings greater than 0.70.

The average variance extracted (AVE) for the financial risk subscale was 0.57 and for the business risk subscale 0.72; these were above the recommended minimum level of 0.50. These two subscales formed the revised risk scale which was used for further analysis.

Dimensionality of the Neuroticism scale

For the Neuroticism scale, the obtained Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.83, and Bartlett's Test of Sphericity test statistic value was 359.97 (df = 15; $p = 0.00$), which allowed for the identity matrix null hypothesis to be rejected. This indicates the factorability of the correlation matrix. One factor emerged and the total variance extracted was 39.6 percent. Inspection of the item communalities indicated that items p2, p3, p4 and p10 had communalities below the recommended levels of 0.40. When these items were dropped, the total variance extracted went up to 56%, which is 0.56 AVE for a one factor solution. This obtained value is above the minimum acceptable level of 0.50 recommended by Hair et al. (2021). These items formed the neuroticism scale.

Dimensionality of the Emotional intelligence scale

Exploratory factor analysis showed that the Emotional intelligence scale was factor analysable with a KMO measure of sampling adequacy of 0.80 and Bartlett's test of sphericity test statistic value of 607.55 (df = 36; p = 0.00). Two factors emerged with a total variance extracted of 59.99. All item communalities were above 0.40 and their factor loadings were above 0.50. Item emot5 loaded substantially on the emotional self-awareness subscale instead of the self-regulation subscale. The AVE for both self-awareness and self-regulation was 0.61 above the minimum recommended level of 0.50.

7.4 DATA ANALYSIS RESULTS

This section presents the results of the data analysis.

7.4.1 Normality of data

Skewness and kurtosis were analysed through the descriptive analysis function in SPSS version 25. According to Field (2018), the values of skewness and kurtosis should lie between ± 2. The Kolmogorov-Smirnov and Shapiro-Wilk tests of normality were not used as these tests are sensitive to sample size (Field, 2018). Outliers were identified through histograms and box plots and winsorised by substituting them with the highest value that is not an outlier (Field, 2018).

Table 7.3 shows the skewness and kurtosis of the study variables. For all the study variables both the skewness and kurtosis were within acceptable levels, indicating the scales were normally distributed. There were outliers on the neuroticism scale for values greater than or equal to 22. These were winsorised to 21, as removing them would have reduced the sample size. There were also outliers on the emotional intelligence scale for values less than or equal to 24. These were winsorised to 25.

TABLE 7.3: Skewness and kurtosis of the study variables

	Skewness	Standard error	Kurtosis	Standard error
Firm performance	-0.514	0.191	0.619	0.380
Corporate governance	-0.549	0.191	-0.214	0.380
Risk attitude	-0.034	0.191	-0.281	0.380

Neuroticism	0.637	0.191	0.213	0.380
Emotional intelligence	0.375	0.191	-0.016	0.380

The descriptive analysis of the data is presented next.

7.4.2 Descriptive statistics

This section examines the obtained responses from the corporate governance and firm performance questionnaires based on the data obtained from the survey. Table 7.4 provides descriptive statistics, i.e., the mean, median and mode of the two variables which are the main subject of this investigation.

TABLE 7.4: Descriptive statistics: Corporate governance and firm performance

Question	cg1	cg2	cg3	cg4	cg5	cg6	Profit margin	Asset growth	Return on Assets
Mean	4.20	3.61	4.19	4.24	3.78	3.83	3.89	3.72	3.76
Median	4.00	4.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode	4.00	4.00	5.00	4.00	4.00	4.00	4.00	4.00	4.00
Std. Deviation	.67	1.25	1.24	.71	1.07	1.13	1.08	1.11	1.06

cg1 - The total number of directors on the governing body/board is appropriate and sufficient to provide good governance oversight.

cg2 - The governing body is composed of a majority of non-executive directors, most of whom are independent.

cg3 - The positions of CEO and board chairman are not held by one individual.

cg4 - The governing body meets frequently enough to ensure effective oversight of the organisation.

cg5 - The compensation for the CEO/executives includes performance-based measures that support positive outcomes across the economic, social, and environmental context.

cg6 - The number of years the current sitting CEO has been CEO continuously is within acceptable levels to ensure effective management of the organisation.

The scales as discussed in Section 5.10.5.1 ranged from 1 to 5 with 1 being strongly disagree and 5 being strongly agree. For corporate governance, the mean for all the questions was above 2.5, indicating that on average there were good corporate governance practices in the sample’s individual organisations. The highest was a mean of 4.2, relating to the supposition that the total number of directors on the governing body/board was appropriate and sufficient to provide good governance oversight. The mode, being the most frequent response, was 4,” agree”, for all the suppositions or questions. Because the mode was equal to the median, it then follows that the data set had no distinct central tendency.

For firm performance, respondents on average worked for companies that performed well, with a mean of 3.89, 3.72 and 3.76 for profit margin, asset growth and return on assets respectively. The mode is also 4 and the same with the median showing evenness of distribution between the lowest and the highest values in the data set. In relation to the above discussion on corporate governance this gives preliminary linkages between the two variables of interest, in this case, a positive relationship.

These preliminary linkages are further tested through correlation analysis in the next section.

7.4.3 Correlation analysis of the study variables

The relationship between corporate governance and firm performance discussed in 7.4.2 above was further examined through correlation analysis. The other study variables were subjected to the same correlation analysis to establish the associations between them. Correlation analysis is the term "used to denote the association between two (or more) quantitative variables" (Gogtay & Thatte, 2017: 78). Correlation analysis examines two main associations: the strength or extent and the direction of the association, resulting in a specific correlation coefficient (r) which ranges from -1 to +1. The coefficient of +1 is interpreted as perfect positive relationship with -1 indicating perfect negative association while a coefficient of 0 points to no linear relationship.

In this study, the Karl Pearson product moment correlation coefficient (r) method of correlation analysis was utilised. Pearson's correlation coefficient assumes that the relationship is linear and that the variables are independent and normally distributed. The variables in this study are linear, independent of each other and found to be normally distributed. The statistical significance level of 1% was the only significance considered inorder to identify the most substantial and strongest correlations and avoid the probability of observing results by chance alone, assuming the null hypothesis is true. Pearson correlations with 10000 bootstrap samples with replacement were done on the study variables. The detailed results are shown in Table 7.5 and the analysis follows.

TABLE 7.5: Bootstrap correlations of study variables

	Firm performance	Corporate governance	Risk attitude	Neuroticism	Emotional intelligence	Number of employees	Years in existence
Firm performance	1	.405**	-.001	-.149	.226**	.154	.113
Corporate governance	.405**	1	-.039	-.133	.267**	.267**	.016
Risk attitude	-.001	-.039	1	-.215**	.226**	-.041	.087
Neuroticism	-.149	-.133	-.215**	1	-.410**	-.083	-.122
Emotional intelligence	.226**	.267**	.226**	-.410**	1	.059	.023
Number of employees	.154	.267**	-.041	-.083	.059	1	.137
Years in existence	.113	.016	.087	-.122	.023	.137	1

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

c. Unless otherwise noted, bootstrap results are based on 10000 bootstrap samples.

95% confidence intervals.

Firm performance was positively and significantly correlated with corporate governance $r = 0.41$; $p = 0.01$, C.I. (0.256 to 0.537). Firm performance was also positively correlated with emotional intelligence $r = 0.23$; $p = 0.01$, C.I. (0.062 to 0.388). Corporate governance had a positive and significant relationship with emotional intelligence $r = 0.27$; $p = 0.01$, C.I. (0.126 to 0.398). Risk attitude had positive and significant correlation with emotional intelligence $r = 0.23$; $p = 0.01$, *C.I.* (0.063 to 0.384). There was, however, a significant negative correlation between risk attitude and neuroticism $r = 0.22$; $p = 0.01$; *C.I.* (-0.355 to -0.70). As was expected, there was a significant negative correlation between emotional intelligence and neuroticism $r = -0.41$; $p = 0.01$, C.I. (-0.558 to -0.247), given the correlation discussed before between emotional intelligence and risk attitude which was positive.

Of note in the context of the research objectives, as shown in the table above, are the positive and significant correlations of emotional intelligence with all of the study variables except neuroticism which had a significant negative correlation coefficient. This is an indication that emotional intelligence plays an even more vital role in the model, whose linkages will be further explored through regression analysis.

Before proceeding to the moderated-moderated mediation model, common method variance was assessed by the Harman's single-factor test and aggregation from individual level to organisation level analysis through intraclass correlation analysis. These are discussed next.

7.4.4 Common method variance

Common method variance (CMV) refers to the biasing effect of having the same respondents for both the predictor and outcome, as in this study. Common method variance creates a systematic covariation which is inflated above the true relationship (Rodriguez-Ardura & Meseguer-Artola, 2020). Van Witteloostuijn, Eden, and Chang (2020), note that CMV might need to be accommodated, especially in instances where data is scarce which is highly the case in developing countries. The research was Zimbabwe and South Africa, countries which are classified under developing nations. Furthermore, the study could not rely on objective data from audited financial statements in one of the countries being Zimbabwe due to qualifications or issuance of adverse opinions by external auditors as discussed in Chapter 6.

A Harman one-factor analysis was conducted by entering all the study variables into factor analysis and assessing the extent to which one dominant factor emerged. The results of this analysis as shown in Table 7.6 indicated that common method bias was not problematic as the single dominant factor only accounted for 0.18 of the common variances extracted against a threshold of 0.5 for a meaningful construct (Fornell & Larcker, 1981), indicating negligible bias.

TABLE 7.6: Herman's one factor model

Total variance explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.525	18.417	18.417	5.525	18.417	18.417
2	3.259	10.862	29.279			
3	2.602	8.675	37.954			
4	2.241	7.471	45.425			
5	1.822	6.075	51.500			
6	1.366	4.552	56.052			
7	1.249	4.164	60.215			

Total variance explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
8	1.023	3.411	63.626			
9	.879	2.929	66.555			
10	.847	2.822	69.377			
11	.794	2.645	72.022			
12	.760	2.534	74.557			
13	.735	2.449	77.005			
14	.688	2.294	79.299			
15	.643	2.142	81.441			
16	.607	2.025	83.466			
17	.597	1.991	85.457			
18	.529	1.762	87.219			
19	.482	1.607	88.826			
20	.450	1.502	90.327			
21	.413	1.376	91.703			
22	.378	1.260	92.964			
23	.368	1.227	94.191			
24	.341	1.136	95.327			
25	.311	1.037	96.364			
26	.295	.984	97.347			
27	.259	.864	98.211			
28	.226	.752	98.964			
29	.173	.578	99.542			
30	.137	.458	100.000			
Extraction method: Principal component analysis.						

Van Witteloostuijn et al. (2020) acknowledge that the more complex the model, the less influence common method bias, as individuals would not have a cognitive map of the relationships being sought by the researcher. As reported by the aforementioned authors, many other scholars have in prior studies supported this supposition highlighting that the inclusion of mediation, moderation and non-linear relationships in a hypothesised model increases its complexity, of which respondents are not expected to be reasonably aware of the effect of their responses (Podsakoff et al., 2003; Siemsen et al., 2010; and Podsakoff et al., 2012). This model is a complex structural equation model constructed through an elaborate exploratory mediation analysis with relationships among the variables being sought not known or not obvious to the respondents.

In addition, to improve the coherence of the model, the model was tested through another statistical software, Amos, to enhance credibility of the framework. To further control the common method bias, expert opinion from the subject matter experts was sought to validate the framework. Below is a discussion on the level of analysis pertaining to the study.

7.4.5 Aggregation of individual level data to organisational level

To investigate whether single individual level data could be aggregated to the organisational level, intraclass correlations (ICC) were computed. ICC is a measure of the proportion of group level variance at the individual level (Mierlo et al., 2008). ICC (1) assesses the extent to which scores are affected by organisational membership and can be taken as an effect size estimate of group membership (LeBreton & Senter, 2008). ICC (2) indicates the reliability of the mean scores at the organisational level.

According to LeBreton and Senter (2008), because the research is taking a sample of participants from various organisations, a two-way random effects model would be appropriate to generalise the findings. ICC (2) reliability estimates ≥ 0.70 are acceptable to justify aggregation to the organisational level. As ICC (1) reliability estimates can be interpreted as effect sizes, Cohen's (1988) guidelines can be used to interpret the level of individual reliability (LeBreton & Senter, 2008).

The tables below show the ICCs for corporate governance, risk attitude, neuroticism and emotional intelligence using a two-way random effects model as recommended by Lebreton and Senter (2008). As ICCs for all variables, with reference to Table 7.7, were above the recommended levels, the individual level data can be aggregated to the organisational level.

TABLE 7.7: Intraclass correlation coefficient

Intraclass	Description	Intraclass Correlation[b]	95% Confidence Interval		F Test with True Value 0			
			Lower Bound	Upper Bound	Value	df1	df2	Sig
Corporate governance intraclass coefficients	Single measures	.360[a]	.292	.435	4.376	160	800	.000
	Average measures	.771	.712	.822	4.376	160	800	.000
Risk attitude intraclass coefficients	Single measures	.315[a]	.252	.386	4.215	160	960	.000
	Average measures	.763	.702	.815	4.215	160	960	.000
Neuroticism intraclass coefficients	Single measures	.348[a]	.288	.416	5.800	160	1280	.000
	Average measures	.828	.785	.865	5.800	160	1280	.000
Emotional intelligence	Single measures	.354[a]	.281	.434	3.741	160	640	.000
	Average measures	.733	.661	.793	3.741	160	640	.000

Two-way random effects model where both people effects and measures effects are random.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

Since correlation analysis is the examination of associations only and not causal relationships of the variables being studied, linear regression analysis was employed to establish the interdependence of the variables (Gogtay & Thatte, 2017). The results of the regression analysis follow in the ensuing section.

7.4.6 Regression analysis of the study variables

Regression analysis assists in the understanding of how a dependent variable, in this case firm performance, changes with changes in one or more predictor variables, i.e., independent variables. *R*-squared is ordinarily used to predict the extent of variability induced by the independent variable in the dependent variable (Gogtay & Thatte, 2017).

Subsequently, the test for significance generates the *p*-value. Each of the paths in the moderated-moderated mediation model was tested and probed for interaction effects using Hayes PROCESS model 1 version 3. The regression statistics in two decimal places for all the interactions tested are shown in Table 7.8.

TABLE 7.8: Regression models interactions

Interactions	**Beta Coefficient**	**R-Sq Change**	**F**	**df1**	**df2**	**P**
Outcome variable: Firm performance						
Corporate governance by Risk attitude	0.01	0.00	0.21	1.00	157.00	.65
Corporate governance by Emotional intelligence	0.01	0.00	0.61	1.00	157.00	.44
Risk attitude by Emotional intelligence	0.04	0.05	8.76	1.00	157.00	.01
Risk attitude by Neuroticism	- 0.02	0.01	1.30	1.00	157.00	.26
Corporate governance by Firm size	0.03	0.00	0.10	1.00	157.00	.76
Corporate governance by Firm age	0.22	0.03	6.14	1.00	157.00	.01

The most significant interactions are shown in bold. The commentary on the regression models is as below.

i. Corporate governance by risk attitude interaction

Corporate governance did not interact with risk attitude to influence firm performance with an *R*-square change of 0.001 (F =0.21; df1 = 1, df2 =157; *p* = 0.65). The interpretation is that risk attitude did not moderate the relationship between corporate governance and firm performance.

ii. Corporate governance by emotional intelligence interaction

Emotional intelligence did not interact with corporate governance to influence firm performance. The obtained *R*-square change of 0.003 (F =0.61; df1 = 1, df2 =157; *p* = 0.44) for the interaction term was insignificant.

iii. Risk attitude by emotional intelligence interaction in predicting firm performance

The interaction effect of the risk attitude by emotional intelligence in predicting firm performance was significant with *R*-square change = 0.05 (F = 8.76; df1 = 1, df2 = 157; *p* = 0.005). This means that risk attitude by emotional intelligence interaction predicted the variations in firm performance up to 5% more. The *p*-value of 0.005, which is $p<0.05$, indicates that the interaction was significant. The positive beta value of 0.44 implies that the interaction had a positive influence on firm performance.

Figure 7.1 below is the graphical presentation of the interaction.

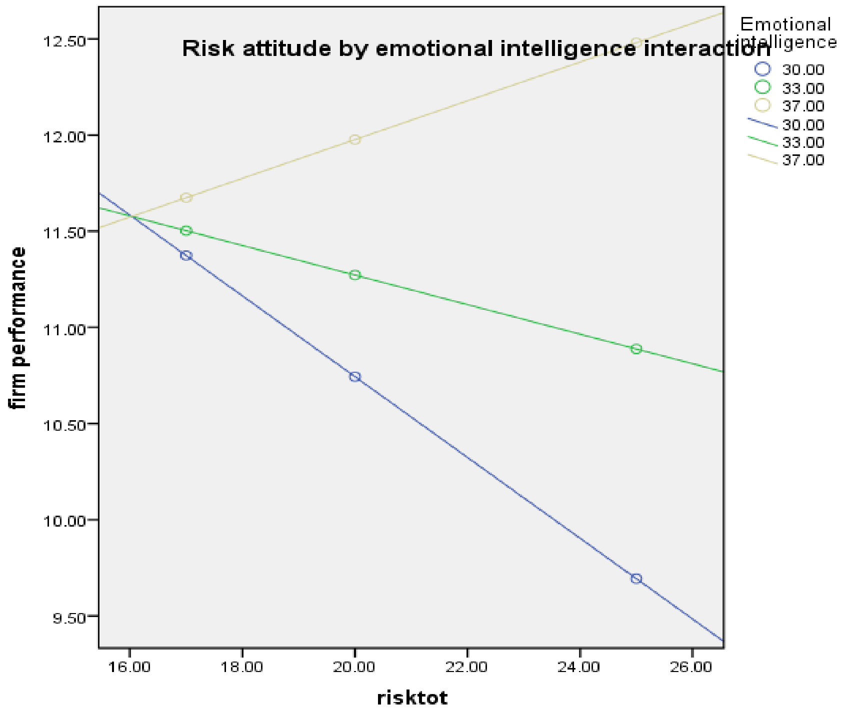

FIGURE 7.1: Risk attitude by emotional intelligence interaction

In Figure 7.1, the coloured lines represent the different levels of the moderator i.e., emotional intelligence (37,33,30). The yellow line is the "high in emotional intelligence" (37), with the blue line being "low in emotional intelligence" (30). This graph can be interpreted to mean that as the moderator – emotional intelligence – increases, firm performance also increases in the wake of taking higher risks. The reverse can also be said: if the moderator – emotional intelligence – decreases, so does firm performance for those that take high risks. In other words, managers who are high in emotional intelligence tend to take calculated risks that increase the performance of their respective organisations.

iv. Risk attitude by neuroticism interaction in predicting firm performance

There was a negative and insignificant risk by neuroticism interaction effect in predicting firm performance with an *R*-square change of 0.01 (F = 1.30; df1= 1, df2 = 157; p = 0.26).

7.4.6.1 *Control variables' interactions with corporate governance*

The interaction of corporate governance

with firm size and firm age, whose variables are controlled for in the study, is discussed forthwith.

i. Corporate governance by firm size interaction

Hayes' PROCESS model 1 was used to determine the conditional effect of firm size measured by the number of employees in the firm. The results of the analysis indicate that firm size did not moderate the relationship between corporate governance and firm performance. The corporate governance by firm size was not significant. The *R*-square change was 0.0005 (F = 0.0962; df1 = 1, df2 = 157; $p = 0.76$).

ii. Corporate governance by number of years firm was in existence (age) interaction

The results of the interaction effect between corporate governance and firm performance were significant with an *R*-square change of 0.03 (F = 6.14; df1 = 1, df2 = 157; $p = 0.01$), meaning that the interaction effect had 3% more influence on firm performance. The positive beta value of 0.22 implies that the influence was positive.

The next section examines the mediation effects of emotional intelligence as it had significant correlations with all the other variables, inferring that it could mediate the relationship between corporate governance and firm performance.

7.4.7 Mediation effects of emotional intelligence

As depicted in Table 7.5, emotional intelligence correlated highly with corporate governance, risk attitude and neuroticism as well as the firm performance dependent variable. This suggested that emotional intelligence could mediate the relationships between corporate governance and firm performance on the one hand and risk attitude and firm performance on the other hand. The mediation results follow below.

i. The mediation effect of emotional intelligence on the corporate governance and firm performance relationship

The indirect effect or index of mediation of emotional intelligence on the relationship between corporate governance and firm performance was insignificant (0.02. se = 0.02, CI = - 0.0026 to 0.0233). The confidence interval passed through zero and hence the result was not significant (Hayes, 2018). This discounts the supposition that corporate governance has its effects on firm performance through emotional intelligence.

ii. The mediation effect of emotional intelligence on the risk attitude and firm performance relationship

The index of mediation of emotional intelligence on the relationship between risk attitude and firm performance was significant (0.04, s.e. = 0.02, C.I. = 0.0058 to 0.0856). The confidence interval indicates that index of mediation did not pass through zero. This indicates that risk attitude has its effect on firm performance through emotional intelligence. The only significant mediation of emotional intelligence was on risk attitude and firm performance. The framework is thus modified to include emotional intelligence as one of the mediators with risk attitude. Emotional intelligence on its own does not operate as an independent mediator; it only mediates as part of a longer causal chain.

7.4.8 Test of the model – serial mediation of corporate governance by risk attitude and emotional intelligence

The above analysis pointed to Model 6 of Hayes (2018) for SPSS and SAS. The conceptual model is a serial mediation by hierarchical causally related mediators, i.e., risk attitude and emotional intelligence. The conceptual model is presented in Figure 7.2.

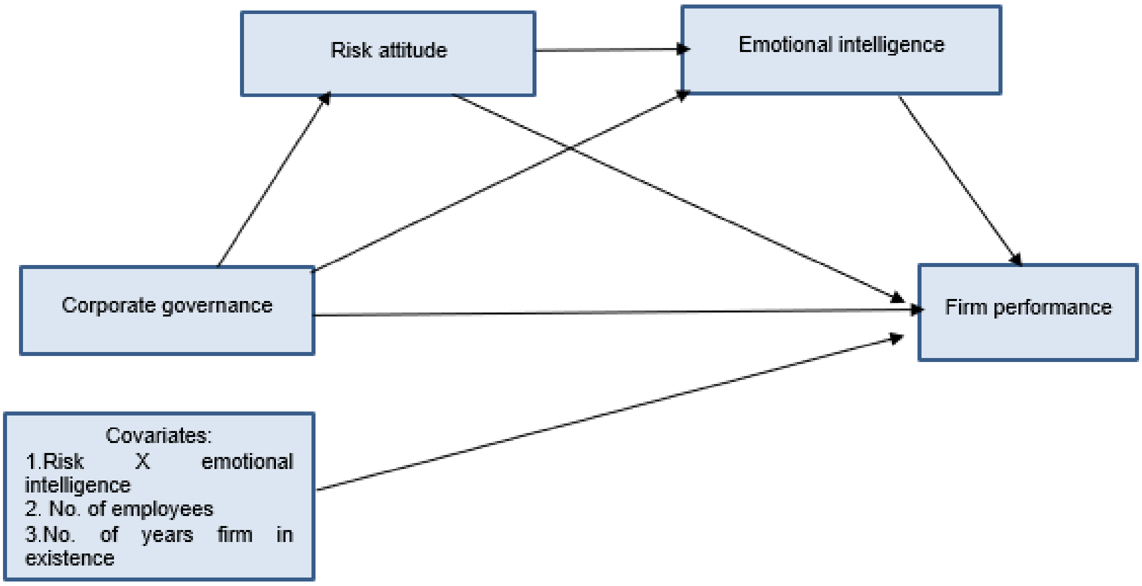

FIGURE 7.2: Statistical model of the study variables

With serial mediation such as the one shown in Figure 7.2, the indirect effects are split into a number of specific indirect effects, whose sum will give the total indirect effect. Three distinct indirect effects can be hypothesised. There is therefore the long way mediation which involves both risk attitude and emotional intelligence mediators and then there are mediations that involve only one mediator in each path, called shortcut mediations. The referred paths would be corporate governance to firm performance through risk attitude and another path through emotional intelligence. Serial can only be claimed if the long way path is significant (Hayes, 2018). The specific causal chain is through risk attitude first and then through emotional intelligence.

The total indirect effect can therefore be interpreted as the extent to which the long way mediation and the shortcut mediations together explain the effect of corporate governance on firm performance. The three indirect effects for this model are given below.

Indirect effect 1 (a_1b_1) - corporate governance _> risk attitude _> firm performance

Indirect effect 2 (a_2b_2) - corporate governance _> emotional intelligence _> firm performance

Indirect effect 3 (a_1db_2) - corporate governance _> risk attitude _> emotional intelligence _> firm performance

The indirect effect (*a_1b_1*) of corporate governance through risk attitude to firm performance was positive and significant, *ab* = 0.17, s.e. = 0.07, CI = 0.03 to 0.33. This indicates that risk attitude mediated the relationship between corporate governance and firm performance, answering the research question of whether risk attitudes mediated the relationship between corporate governance and firm performance.

The indirect path (a_2b_2) from corporate governance through emotional intelligence to firm performance was not significant with *ab* = 0.01, s.e. = 0.01, CI = -0.0064 to 0.0369 as the confidence interval passed through zero. It can be concluded that emotional intelligence did not mediate the relationship between corporate governance and firm performance. However, the indirect path $a_1\ d\ b_2$ (Hayes, 2018, Model 6) from corporate governance through risk attitude and emotional intelligence to firm performance was significant with $a_1\ d\ b_2$ = -0.14, s.e. = 0.07, CI = -0.28 to -0.01 as the confidence interval did not pass through zero. As the path coefficient is a multiplicative one, the implication is that as risk attitude increases and emotional intelligence decreases, or vice versa, firm performance is affected negatively.

In conclusion, the total direct (*c*) and indirect (*c'*) effects of corporate governance on firm performance were significant with *c* = 0.28, s.e. = 0.05, t = 5.15, *p* = 0.00, CI = 0.18 to 0.38 and c' = 0.23, s.e. = 0.06, t = 3.91, *p* = 0.00, CI = 0.11 to 0.35 respectively, confirming mediation. Due to the fact that both the direct and indirect effects were significant and had positive betas this signifies ***partial complementary mediation***. Table 7.9 shows the results of the serial mediation of corporate governance by risk attitude and emotional intelligence on firm performance.

TABLE 7.9: Model summary of the variance explained in predicting firm performance

Outcome variable: Firm performance							
	R	**R-Sq**	**MSE**	**F**	**df1**	**df2**	**P**
Model summary	.4756	.2262	5.9169	9.7117	6.0000	154.0000	.0000
Model	**Coefficient**	**Se (HC3)**	**T**	**P**	**LLCI**	**ULCI**	
Constant	27.8261	9.9321	2.8016	.0057	8.2054	47.4468	
Cgtot	.2322	.0594	3.9079	.0001	.1148	.3497	

Risktot	-1.3090	.4599	-2.8460	.0050	-2.2175	-.4004
emottot	-.6658	.2799	-2.3791	.0186	-1.2187	-.1129
risk_emo	.0382	.0132	2.8805	.0045	.0120	.0643
Noees	.3115	.3252	.9578	.3396	-.3309	.9539
Exstyrs	.4066	.4094	.9930	.3222	-.4022	1.2154

Key: cgtot = corporate governance; risktot = risk attitude; emottot = emotional intelligence; risk_emo = risk attitude by emotional intelligence interaction; and exstyrs = number of years firm was in existence.

Source: Table extracted from Hayes PROCESS for SPSS version 25

The predictors explained 23 percent of the variance in firm performance (F = 9.71, df1 = 6, df2 = 154; *p* = 0.00). This prediction can be said to be significant since $p<0.05$ at *p* = 0.0000. As depicted in Table 7.9, all the predictors were significant except the number of employees and the number of years the firm was in existence, meaning that the two control variables did not have an effect on the model.

Corporate governance positively predicted firm performance as the beta value was positive (*b* = 0.23, *p* = 0.001 and C.I. = 0.11 to 0.35), confirming that the higher corporate governance compliance, the higher the firm performance as measured by profitability ratios. The *p*-value of 0.001 denotes that there is significant prediction.

Risk attitude and emotional intelligence as individual predictors negatively predicted performance with values of *b* = -1.31, *p* = 0.005, CI = -2.22 to -0.40 and *b* = -0.67, *p* = 0.02, CI = -1.22 to -0.11 respectively. This means that as risk attitudes or emotional intelligence increases, individually, firm performance tends to decrease or vice versa. However, the risk attitude by emotional intelligence interaction term positively and significantly predicted firm performance (*b* = 0.04, *p* = 0.005, CI = 0.01 to 0.06).

7.4.8.1 *Confirming the model with Amos statistical software*

The model was run in Amos version 23. The model fit indices were χ^2/df=0.26, TLI=0.997, CFI=1.000 and RMSEA= 0.04 which show a good fit of the model to the data (Hu & Bentler, 1999). Figure 7.3 shows the path model from Amos version 23.

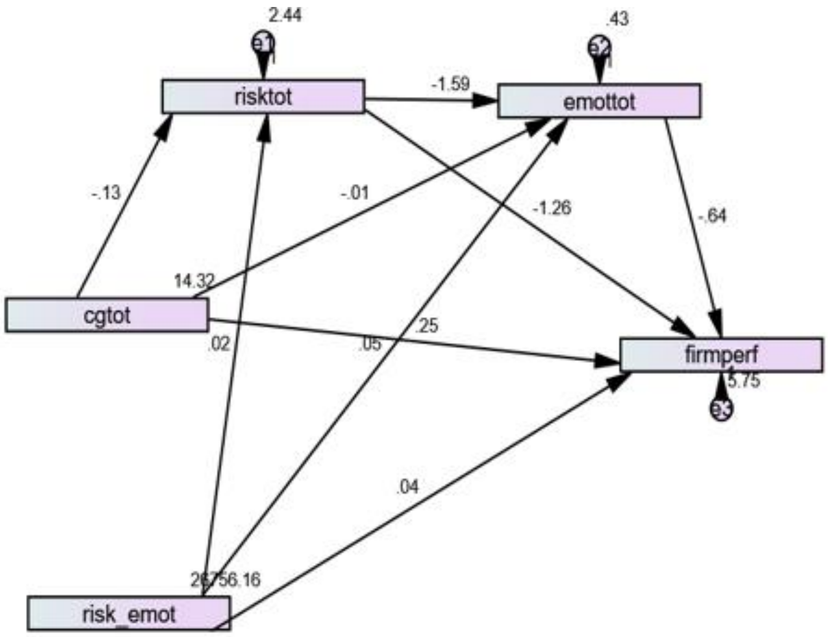

FIGURE 7.3: Path model predicting firm performance in Amos with standardised regression weights shown

All paths in the model were significant except corporate governance – emotional intelligence, confirming the PROCESS output discussed in the previous sections. The user defined estimands function was used to confirm the indirect path estimates in the serial mediated Model 6 from Hayes PROCESS. Table 7.10 confirms the results in Amos, giving both the lower and upper 95% confidence interval as well as the significance level.

Table 7.10: Model results from Amos

Parameter	Estimate	Lower	Upper	P
SIE1	.159	.027	.329	.005
SIE2	.006	-.009	.033	.349
SIE3	-.128	-.286	-.007	.026

Regression Weights: (Group number 1 - Default model): User-defined estimands: (Group number 1 - Default model) of the indirect paths

SIE = Specific Indirect Effect
SIE1 = corporate governance -> risk attitude -> firm performance
SIE2 = corporate governance -> emotional intelligence -> firm performance
SIE3 = corporate governance -> risk attitude -> emotional intelligence -> firm performance

The Multiple Indicator – Multiple Cause (MIMIC) model using Amos (Crowson, 2021) was used to determine if the path in the structural equation model would change significantly by adding firm size and the number of years the firm was in existence, as these were the control variables. The path model for the influence of firm size showed excellent model fit. The model fit indices were χ^2/df = 1.23, TLI = 1.00, CFI = 1.00 and RMSEA= 0.00 which show a good fit of the model to the data (Hu & Bentler, 1999). The path model for the influence of the number of years the firm was in existence was also very good with χ^2/df=0.80, TLI=1.00, CFI=1.00 and RMSEA= 0.04.

As firm size was coded from low to high, the unstandardised coefficient (b = 1.56, p = 0.000) for size on corporate governance shows that the mean for firms that are large was greater than that for firms that are small. Thus, large firms tend to have better corporate governance than small ones. There was no significant difference in mean levels of firm performance between large and small firms, as the path coefficient from size to firm performance was insignificant (b= 0.37, p = 0.23).

The number of years the firm was in existence was coded from low to high. There were no significant path coefficients from number of years the firm was in existence to any of the study variables. This indicates that the age of an organisation did not have a significant influence on either corporate governance or firm performance (b=0.47, p = 0.20).

7.4.8.2 *Variations across demographics*

It was determined whether the demographic variables of age, gender, level of position(role) and educational level influenced the resultant model. A series of the Multiple indicator – Multiple cause (MIMIC) model using Amos (Crowson, 2021) was used to determine if the path in the structural equation model would change significantly by adding these additional demographics.

<u>Age</u> - Including age in the path in the model, the fit indices were χ^2/df = 1.11, TLI = 1.00, CFI = 1.00 and RMSEA= 0.026, which show a good fit of the model to the data (Hu & Bentler, 1999). However, the path coefficients from age to corporate governance (b = 0.21, p = 0.65), risk attitude (b = 0.02, p = 0.81) and firm performance (b = -.12, p = 0.69) were not significant. This indicates that age did not influence the mean levels of the study variables.

Gender - By adding age to the MIMIC model, the following model fit indices were obtained: $\chi^2/df = 3.14$, TLI = 0.96, CFI = 1.00 and RMSEA= 0.12. As the root mean square error of approximation (RMSEA) was beyond the recommended level of 0.08 (Hu & Bentler, 1999), inclusion of gender did not fit the data and was consequently irrelevant to the model.

Level of position (role) - The MIMC model including level of position (role) had the following model fit indices: $\chi^2/df = 1.23$, TLI = 1.00, CFI = 1.00 and RMSEA= 0.04, indicating very good fit. The path coefficients from role to corporate governance (b = 0.24, $p = 0.57$), risk attitude (b = 0.03, $p = 0.86$), emotional intelligence (b = 0.06, $p = 0.41$) and firm performance (b = 0.30, $p = 0.26$) were all insignificant, indicating level of position did not have an influence on the model.

Educational level - The inclusion of level of education in the MIMIC model resulted in the following model fit indices: $\chi^2/df = 1.63$, TLI = 0.99, CFI = 1.00 and RMSEA= 0.06, indicating good fit to the data. The path coefficients from educational level of managers per firm to corporate governance (b = 0.25, $p = 0.64$), risk attitude (b = 0-0.18, $p = 0.40$), emotional intelligence (b = -0.03, $p = 0.72$) and firm performance (b = 0.69, $p = 0.04$) show that educational level of managers had a positive and significant influence on firm performance. As educational level was coded from low to high, the unstandardised coefficient (b = 0.69, $p = 0.04$) for educational level of managers on firm performance shows that the mean for firms that have managers with higher educational levels was greater than that for firms that have managers with lower levels of education. Thus, firms with managers that have higher educational levels tend to outperform those firms that are not so endowed.

The post hoc analysis of the influence of age, gender, level of position and educational level showed that only educational level of managers had a moderating effect on firm performance.

7.5 VALIDATION OF FRAMEWORK BY SUBJECT MATTER EXPERTS

The aim of engaging in a second round of interviews with subject matter experts was to validate the results of the quantitative survey. Interviews were held with three of the seven industrial psychologists with the study noting a convergence of expert perspectives and hence no more fresh perspectives emerging. This convergence of perspectives indicated that theoretical saturation had been reached. The participants were given a brief description of the method of analysis employed, followed by a presentation of the analysis results.

Subject matter experts' validation of frameworks is crucial for increasing the credibility of a framework by ensuring that the framework is relevant and applicable to the intended population. This strategy has been employed by many scholars across disciplines (Mumford, Devenport, Brown, Connelly, Murphy, Hill and Antes, 2010; Crapo and Moitra, 2013). Wang, Zhang, Chong and Wang (2017) used subject matter experts to validate an Oral Health-Related Quality of Life measure in Korea. Model adequacy evaluation was conducted by Teferra, Shields, Hapij and Daddazio (2014) through incorporating a subject matter expert assessment criterion into a quantitatively formulated criterion. The discussion guide is attached as Appendix 2B.

i. High risk attitudes, high emotional intelligence, high firm performance

The subject matter experts expected that individuals who were high in emotional intelligence would not take risks. The participants however agreed that this expected relationship would be inverse for business professionals. This means that those who were high in emotional intelligence for this population, even when taking high risks would take risks that drove performance. One of the experts indicated that prior studies confirmed that companies with leaders in the age range of 30-45 years had a higher affinity for risk taking than companies led by individuals of 55-60 years. Looking at the age composition of the sample from which the framework was derived, 50.9% were in the age range of 30-40, resonating with the comment by the subject matter expert.

ii. Neuroticism as personality factor not consequential to the framework

Participants indicated that there was a big overlap between personality and emotional intelligence. Agreeing with the framework presented, participants extrapolated from the known fact from literature that conscientiousness was a significant predictor of performance (Cascio & Aguinis, 2014), meaning neuroticism would therefore not be a predictor of performance. They interpreted the framework to mean that when someone had the capacity to manage his or her emotions and triggers, it then followed that when he or she took a risk, it would be well considered. Furthermore, one participant added a new dimension to the explanations, indicating that the higher the emotional intelligence, the more one was able to regulate neuroticism, such that at those levels neuroticism as a personality factor ceased to be of import. Another interesting insight from a participant was that the propensity to take a risk was a personality issue and as such risk attitude could be said to be an element of personality; therefore, personality was already accounted for.

iii. Business and financial as the only risk attitude domains relevant to managerial employees

Insights from the industrial psychologists, after having analysed both the included and excluded risk attitude domains, concurred with the results of the EFA, pointing to the type of population that was surveyed. Their view was that business and financial decisions were the predominant decisions made by managers in organisations, such that all the domains that were outside the business and related business performance were inconsequential.

The participants' interpretation of the results based on individual observations and experience in industrial psychology confirmed the framework as plausible and therefore representative of reality.

7.6 DISCUSSION

Having established the relationship between corporate governance and firm performance using descriptive statistics and correlation analysis, other interactions of the variables under study were examined. Emotional intelligence had significant and positive correlations with corporate governance, as supported by Kumar et al. (2020), risk attitudes (Hillson & Murray-Webster, 2007; Pirayesh, 2014) and firm performance (Kim, 2020). The scholars believe that emotional intelligence is the foundation of corporate governance and by implication firm performance. Emotional intelligence, being the layer between cognition and behaviour, implicitly interacts with individual risk attitude forming behaviour, which is the cognition-action translation process. The behaviour that manifests because of this interaction influences the variations in firm performance. This is in line with Leeper's (1948: 17) characterisation of emotions as powerful motivating forces that "arouse, sustain and direct activity". This confirms the discussion in Chapter 3 that all behaviour is born of individual motivation and therefore unboundedly irrational.

Emotional intelligence, as was expected based on previous studies, had a significant and negative correlation with neuroticism in line with Kumar et al. (2020). This means that people who are highly neurotic are expected to have low awareness and poor control of their emotions. Neuroticism is on the other end of the continuum as conscientiousness, which can also be referred to emotional stability, according to the Big 5 personality traits. Positive emotions, the direct opposite of anxiety and self-doubt which are components of neuroticism, cause cognitive material to be better integrated and thus result in anticipating a positive outcome (Isen, 1987). Such people are quick to generate future ideas and take advantage of opportunities as they present themselves (Mayer, 1986). This is the outcome of positive affect in cognitive processes as discussed in Chapter 3; cognitive biases also affect individual risk attitude and would cause irrational behaviour. In support of this view, Moon (2021: 75), posits that irrational behaviour is induced by “emotional reactions in the face of uncertainty”.

In line with the positive correlations observed between emotional intelligence and individual risk attitude, neuroticism was also noted to have a significant negative correlation with individual risk attitude, meaning that highly neurotic people tend to take careless risks or ill-informed risks. Lee and Foo (2022), in support of this observation, reported that all the Big 5 factors associated positively with individual risk attitude except for neuroticism.

The results of the regression analysis showed that corporate governance did not interact with individual risk attitude to influence firm performance, nor did emotional intelligence interact with corporate governance to influence firm performance. Neuroticism by individual risk attitude interaction insignificantly and negatively predicted firm performance. This is in line with Weber et al. (2002), who point at domain specific risk attitudes, postulating that risk attitudes are not derived from the specific traits of the decision maker. The aforementioned interaction effects prompted neuroticism to be dropped from the framework. Of all the interactions tested through the regression analysis, the individual risk attitude by emotional intelligence interaction predicted firm performance significantly and positively.

The serial mediation of individual risk attitude and emotional intelligence was tested on corporate governance and firm performance. The direct path, being corporate governance to firm performance, was positive and significant. The indirect path, from corporate governance through individual risk attitude and emotional intelligence to firm performance, was also very significant. The predictors explained 23% of the variance in firm performance, which was significant. This interaction, together with the corporate governance direct effect, suggested that there could be other potential omitted variables interacting with corporate governance to predict positively firm performance, since the mediation was a partial complementary mediation. The few scholars that have studied the possibility of intervening variables pertaining to the relationship under study have reported mediation effects of financial reporting quality (Asiedu & Mensar, 2023), ownership concentration (Singh et al., 2017) and sustainability reporting (Alodat, Salleh, Hashim & Sulong, 2022). It is likely that these other potentially omitted variables would also give positive interactions with corporate governance since the individual risk attitude by emotional intelligence interaction gave a positive interaction.

The deduction from the above mediation results is that as individual risk attitude increases and emotional intelligence increases, firm performance also increases. This deduction is supported by Pirayesh (2014), who concluded that emotional intelligence was positively linked to investment decision-making, translating to investors applying more emotional intelligence as investment risk increased. Emotions are thus adaptive, which can lead to the transformation of real-life interactions of internal and external factors into positive outcomes. This view is supported by Salovey and Mayer (1990) and Moon (2021), who also view emotions as adaptive. Another reason given by the authors for positive outcomes for those with high emotional intelligence is the effect of "framing". Emotionally intelligent people normally would frame problems in such a way that the problems relate to their internal emotional experience and these individuals tend to be more adaptive, flexible and creative, hence unboundedly irrational, so as to reach their goals.

In reverse, if individual risk attitude increases with emotional intelligence decreasing, firm performance would decrease. In practical terms, this study demonstrates that people who take high risks but with reduced awareness and lack of control of their emotions tend to make decisions that are detrimental to the bottom line, as was also reported by Moon (2021). Moon explains that this condition prevails due to the complex, uncertain and stressful nature of workplaces requiring quick responses which might be marred by biases and assumptions obscuring objectivity. According to Salovey and Mayer (1990), clinicians have always recognised that humans have differing capacities in terms of acknowledging and expressing emotions, which could be due to underlying competencies that are or can be learned. Looking at the sample demographics, 70% of the respondents had at least a master’s degree; this could be a major contributor to the way they perceived and regulated their emotions.

Other demographics collected, i.e., age, gender and role, were found to have no statistical impact on the corporate governance–firm performance relationship. Of particular interest was gender, which Kim (2020) reported to have positive associations with emotional intelligence and firm performance in Vietnamese firms. The author reported that male managers’ unit increases in emotional intelligence had a higher impact on firm performance than similar increases in female managers. Only educational level had a moderating effect on firm performance. This finding is in line with that of Saidu (2019), who studied the influence of CEO characteristics on firm performance in Nigeria and reported that education did improve profitability.

The control variables, i.e., firm age and size, were tested for influence and only firm size was found to have an impact on corporate governance. This means that larger firms have better corporate governance uptake. This finding is in line with that of Farooq, Noor and Ali (2022), who recommend that small businesses should improve their governance mechanisms to enhance firm performance.

In summary, managers that take high risks tend to take well-calculated risks that increase firm performance if they are emotionally self-aware and can effectively regulate their emotions. The higher the individual risk attitude by emotional intelligence interaction, the higher the firm performance as measured by ROA, asset growth and profit margin. Emotional intelligence is of heuristic value and subject to affect and internal and external biases (Moon, 2021; Salovey & Mayer, 1990; Sternberg & Pretz, 2005), culminating in cognitive biases. The same can be said of individual risk attitudes as of the effect of cognitive biases on human rationality, as discussed in Chapter 3. This may mean that decision-making becomes irrational in conditions of uncertainty, which are always prevailing for this population and thus not predetermined as in rational choice theories where cognitive capacities are unlimited.

7.7 SUMMARY

This chapter presented the results of the Phase 2 quantitative enquiry. The results showed that personality measured as neuroticism had no significant relationship with any of the other variables in the framework. Individual risk attitude had a significance effect on firm performance through the emotional intelligence interaction, meaning that as individual managers' risk attitudes as well as emotional intelligence increased, so did firm performance. The serial mediation empirical framework was tested through Hayes version 3 model 6, confirmed using Amos and validated by subject matter experts.

8 CHAPTER 8: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

8.1 INTRODUCTION

The world has witnessed the collapse of many companies from the 2000s to the present, like Enron, WorldCom and – most recently – Silicon Valley Bank, Signature Bank and Credit Seuss. Closer to the research setting, the region has also seen the collapse of VBS Bank and Steinhoff, amongst others. Investigations have attributed these collapses to ineffective risk management practices emanating from poor corporate governance. The aim of this study was to explore the relationship between corporate governance and firm performance through the lens of unbounded irrationality of individual risk attitudes, employing a pragmatism paradigm backed exploratory sequential mixed method design. The philosophical views of human motivation explored in this study – Hobbes, Freud and Maslow – point to the presence of subjective multiple realities, which was the ontological assumption of this study. This chapter presents the conclusions of the study with reference to both the theoretical and empirical objectives the study set out to achieve. The chapter also highlights the theoretical and practical contributions and limitations of the study and proposes areas for further research.

8.2 GAP IN LITERATURE

The conclusion of this research commences with a summary of the research gap for the study:

i. Not many corporate governance–firm performance studies have been done in Africa, particularly in the SADC region.
ii. Literature is fragmented as to the relationship between corporate governance and firm performance (Duong et al., 2019; Bhagat & Bolton, 2019; Buallay et al., 2017; Singh et al., 2017; Rashid, 2018).
iii. Even with institutionalised advancement in corporate governance practices, agency problems persist, eroding corporate value (Van Rensburg et al., 2013).
iv. Prior studies model the relationship between corporate governance and firm performance as too simplistic in that they assume a direct causal relationship

between the two variables (Singh et al., 2017; Zabri et al., 2016; Ahmed & Hamdan, 2015). Most studies disregard the effects of other possible intervening variables such as the psychology of the human self in the formation of risk attitudes.

v. The hard to measure relevant aspects of corporate governance, such as the ethical, psychological and self-governance aspects of humans, are not explained by agency theory and its prescriptions (Deloitte, 2016). Corporate governance mechanisms focus predominantly on monitoring and sanctioning, which are the *hard* prescriptions of corporate governance. Limited or no credence is given to the possible softer prescriptions, which are also incorporated into the general definition of corporate governance. Modern-day scholars have suggested augmenting existing governance practices with psychological aspects.

vi. A consensus exists amongst researchers that there are metapsychological links between different motivation theories and individual irrationality which impact decision-making in organisations (Davidson, 1982; Gardner, 1993; Stein, 2003).

vii. Current corporate governance reforms, like agency theory, model a rational individual who is interested in furthering own interests while maximising his or her usefulness to his or her principals (Glinkowska, 2015). Agency theory in this respect exhibits narrowness in its behavioural assumptions.

The problem statement for the study was:

Even with the institutionalisation of corporate governance, organisations continue to collapse due to poor risk governance. Protecting shareholder value entails an in-depth understanding of the relationship between corporate governance and firm performance. The possible influence of cognitive biases and their impact on human rationality in decision-making is often ignored. Individual risk attitudes as informed by these cognitive biases can explain the irrational behaviour of man in decision-making and as such are critical to the holistic understanding of the relationship between corporate governance and firm performance. A framework which integrates individual risk attitudes as a mediator in the corporate governance and firm performance relationship has thus become imperative to protect shareholder value.

8.3 CONCLUSIONS OF THE STUDY

The study employed an exploratory sequential mixed method design which commenced with a qualitative enquiry through interviews with 7 purposely selected industrial psychologists, which was then followed by instrument selection and adaptation. The multi-step enquiry concluded with a quantitative enquiry involving 161 managerial employees. The aim of the selected research approach was to deduce from literature suppositions that could be tested through multiple enquiry methods with the intention of constructing a coherent framework to address the research problem.

Below are the conclusions by research objective.

8.3.1 Conclusions by research objective

The study set out to achieve 10 objectives, 4 theoretical and 6 empirical.

8.3.1.1 *Theoretical objectives*

Below is a description of how the theoretical objectives of the study were met.

TO 1: Analyse the relationship between corporate governance and firm performance as given in literature.

This objective was achieved through the exploration of literature on the relationship between corporate governance and firm performance in Chapter 2. A two-fold analysis was employed, being a systematic literature review of 20 relevant articles and literature on the relationship causal frameworks in selected studies.

The conclusion from the analysis was that the literature pertaining to this phenomenon was fragmented and inconclusive, with scholars reporting different relationship dynamics between the two variables. Some of the reviewed scholars included Duong et al. (2019); Bhagat and Bolton (2019); Buallay et al. (2017); Singh et al. (2017); and Rashid (2018). Prior research done in the particular research setting reviewed included Mangena, Tauringana and Chamisa (2012), Erasmus, Viviers and Mans-Kemp (2017) Nyakurukwa and Seetharam (2022) and Bussin, Wöcke and Deysel (2023). This study concluded that the relationship was not a simple causal relationship as previously indicated by literature. In fact, the potential effects of the human psychological elements, which are often not observable, on decision-making, were altogether omitted (Deloitte, 2016; Bussin, Wöcke and Deysel, 2023). This apparent gap directed the examination of the next theoretical objective, which looked at the psychology of decision-making as it pertains to human rationality.

In this particular research setting, most of scholars reviewed found a positive relationship with performance measured by accounting performance measures (). The scholars considered corporate governance as measure by board size, ownership concentration, CEO compensation and board independence. However, a number of studies have reported negative relationships between corporate governance and firm performance as measured with performance being measured by market-based measures (Erasmus, Viviers & Mans-Kemp, 2017, Kok, 2020; Nyakurukwa, 2022). Erasmus, Viviers and Mans-Kemp (2017) posit that the negative relationship as measured by market based ratios is attributable to investor scepticism due to increased costs of compliance and window dressing by companies.

TO 2: Analyse the impact of human rationality on decision-making by individuals as given in literature

The exploration of rationality in relation to decision-making in this study ranged from Adam Smith's perfect rationality to Herbert A. Simon's bounded rationality to the proposed concept of unbounded irrationality. Adam Smith posited that humans were concerned with real-valued utility maximisation, while Herbert A. Simon argued that the supposition was inherently wrong, as humans sought to satisfy and not maximise, due to information asymmetry and limited cognitive capacity to process the information.

Scholars coming after Herbert A. Simon's administrative man (bounded rationality) maintained that decision-making rarely followed a rational pattern because it was influenced by habits, norms and values, tradition, experience, preferences and expectations, which were an extension of Herbert A. Simon's cognitive limitations (Tversky & Kahneman, 1981;1986; Davidson, 1982; Dawes, 1988; Kornov & Thissen, 2000; Cristofaro, 2017). These cognitive biases and judgement errors would then inform individual risk attitudes. In relation to decision-making, the study theoretically concluded that people are influenced by various cognitive biases, such that choices become automatic, attitudinal and based on limitless self-interest, making behaviour unboundedly irrational in decision-making under risk and uncertainty.

TO 3: Examine the link between theory on human rationality and the formation of individual attitudes as it pertains to decision-making under risk and uncertainty

The objective was met in Chapter 3 of the study. A number of scholars negated the notion that humans were perfectly rational (Tversky & Kahneman, 1981; Davidson, 1982; Freud, 1910). Freud claimed that human behaviour was a product of an indisputable interaction between rational and irrational processes of the mind in which his tripartite depiction of the mind took centre stage. He posited that the part he called the id, which comprised the greater part of the mind, was the irrational part of the mind which was driven by deep-seated wants, desires and pleasures.

Tversky and Kahneman (1974; 1981) argue that it is impossible to suppose that humans follow a rational process in decision-making as they are susceptible to cognitive biases and judgement errors. These are naturally hardwired within humans for the purposes of self-preservation. De Andreis (2020) claims that risk is inevitable in decision-making under uncertainty as the attitude of invulnerability would then prevail. The study therefore concluded that people's attitudes were formed from these cognitive biases, which would then make them act *rationally irrational* as self-preservation became key in conditions of uncertainty. Davidson (1982) argues that actions serve as causes and not reasons for further psychological actions. Unbounded irrationality provides a lens through which inconsistent management actions can be understood.

TO 4: Develop a preliminary conceptual framework for the corporate governance–firm performance relationship integrating individual risk attitudes based on existing literature

Chapter 4 of the study saw the preliminary construction of the corporate governance–firm performance framework with individual risk attitude as a mediator. The study depicted the phenomenon through the pragmatic and subjective view that the world was a web of networks in constant translation. The conceptualisation of the phenomenon was guided by insights from literature into the novel concept of unbounded irrationality and the actor-network theory.

The proposed framework illustrated the relationship between corporate governance and firm performance with individual risk attitude mediating the relationship while controlling for firm size and age. The framework attempted to capture the manifestation of behaviour through the interwovenness of human and non-human predictors of individual risk attitude forming the collective character of an action.

8.3.1.2 *Empirical objectives*

The purpose of the empirical investigation was to provide a quantifiable basis for the conclusion pertaining to the phenomenon under study. Empirically, the research set out to satisfy 6 objectives.

EO 1: Examine the concept of unbounded irrationality, as it pertains to the formation of individual risk attitudes, and its influences on decision-making as understood by subject-matter experts

Chapter 6 sought to validate the description proposed for unbounded irrationality and establish whether there was a link with individual risk attitude. It further sought to establish whether this relationship had a bearing on management decision-making as given by insights from subject matter experts. Subject matter experts agreed with the literature driven description of unbounded irrationality, reproduced in section 8.4.1.2, and expressed that there was an undeniable relationship between the two constructs. They introduced the variables of emotional intelligence which they posited moderated individual risk attitude and neuroticism which they explained was a personality trait related to the irrational elements of the mind.

According to Moon (2021), perceived irrational human behaviour is more often than not a direct result of internally induced emotional reactions born of uncertainty; leaders, when being called to make unusual decisions, undergo extreme emotional turmoil and the higher the turmoil, the higher the irrationality of decision-making. This supposition is supported by de Andreis (2020), who posits that the attitude of invulnerability prevails in stressful decision-making.

EO 2: Evaluate the individual risk attitude domains relevant to managerial employees as deduced from subject matter experts' insights

Five risk attitude domains of interest to professionals – financial, business, social, ethical and psychological – were derived from the Domain Specific Risk Attitude by Weber and Blais (2006) and the General Risk-taking scale by Hung et al. (2012). In addition, two moderators, i.e., emotional intelligence (Schutte et al., 1998) and the personality trait of neuroticism (Goldberg, 1999), were identified as key in the psychological interactions of these domains. Gordon, Hrazdil, Jermias and Li (2021) underscore the paramount importance of understanding the impact of a leader's inherent personality on the effectiveness of governance mechanisms.

The interaction born of the unbounded irrationality forces, measured through the neuroticism and individual risk attitude domains' collective action, causes behaviours to manifest. Emotional intelligence can thus be employed in regulating emotional turmoil in managers when making unusual decisions (Pirayesh, 2014). The way one responds to the forces of neuroticism will thus depend on one's emotional intelligence.

EO 3: Develop a conceptual framework for the corporate governance–firm performance relationship based on the results of in-depth interviews with subject matter experts

The analysis of subject matter experts' suppositions culminated in the formulation of a moderated-moderated mediated framework in Chapter 6. The framework depicted emotional intelligence as a moderator of the personality trait of neuroticism, which in turn moderates individual risk attitudes. Emotional intelligence therefore regulates the "emotional instability" associated with feelings of anxiety, anger and stress. The degree to which one falls prey to neuroticism will depend on one's emotional intelligence. In the same vein, the degree to which the corporate governance and firm performance relationship is influenced by individual risk attitude is dependent on the level of interaction between individual risk attitude, emotional intelligence and personality.

The framework therefore explained how individual risk attitude influences decision-making and hence firm performance, given one's psychological disposition towards neurotic behaviour as moderated by the ability to decipher and regulate one's emotions.

The resultant framework became the test model for the empirical quantitative examination, which was the subject of the ensuing objective.

EO 4: Identify and analyse the individual risk attitude domains relevant to managerial employees as informed by a quantitative enquiry

Individual risk attitude was measured by the five subscales, i.e., 20 subscale items (Weber & Blais, 2006; Hung et al., 2012) as given by the domains identified in the Phase one data collection through interviews with subject matter experts. As the objective of the study was to measure the composite risk attitude, all the subscale items with acceptable reliability statistics were aggregately analysed. Out of this, ten (10) items fell below the acceptable criterion level of 0.30 for item-total score correlations. When these items were removed, the risk scale reliability rose to 0.76 from 0.70.

The items that remained were factor analysed and two factors emerged, corresponding to the financial risk subscale and the business risk subscale. All the items had factor loadings greater than 0.70; this became the revised risk scale employed in further analysis. Finally, the domains most relevant to managers of profit-making corporates were the financial and business domains. This conclusion was validated through a second round of interviews with subject matter experts.

EO 5: Investigate the extent to which the corporate governance–firm performance relationship is mediated by the individual risk attitudes of those charged with managing corporates

Chapter 7 applied itself to the moderated-moderated mediation model; each of the paths in the model was tested and probed for interaction effects using Hayes PROCESS model 1 version 3. The framework had 5 constructs: firm performance (dependant variable), corporate governance (independent variable), individual risk attitude (mediator), emotional intelligence and neuroticism which were shown as moderators of individual risk attitude.

The results of the empirical testing confirmed prior research (Solomon, 2017; Moudud-Ul-Huq et al., 2018) that firm performance was positively and significantly correlated with corporate governance, closing the fragmentation in literature highlighted as one of the gaps for this study.

The relationships between individual risk attitude and corporate governance and individual risk attitude and firm performance were insignificant at this level of analysis. However, as the model is still in construction, interaction terms for the model are discussed in the ensuing section.

Emotional intelligence, which was measured through the two variables of self-awareness of emotions and emotion regulation, was found to have a positive and significant influence on both firm performance and corporate governance. This means that individuals who have high traits of emotional intelligence tend to contribute positively to both the uptake of corporate governance and improved firm performance.

Pertaining to emotional intelligence and individual risk attitude, the conclusion from the corelation analysis was that the higher emotionally intelligent one is, the higher the risk affinity. This analysis is supported by Moon (2021) in her article titled “Effect of emotional intelligence and leadership styles on risk intelligent decision-making and risk management”. The author posits that individuals who are highly emotionally intelligent are better placed to challenge orthodoxies and internal biases, making them risk-taking lovers. Emotional intelligence, as anticipated and predicted through literature, had a negative relationship with neuroticism. This means that individuals who score high in neuroticism as a personality trait are most likely to be highly emotionally unstable, which would then by inference cause them to be poor judges of risk.

EO 6: Develop the final framework for the corporate governance–firm performance relationship which integrates individual risk attitudes based on the results of a quantitative survey of management employees and validation thereon by Subject matter experts

Regression analysis was conducted to expand the understanding of the relationship between the constructs in the proposed framework over and above the correlations. The regression analysis showed that there was no effect on firm performance as a result of changes in corporate governance–emotional Intelligence interaction. The individual risk attitude by neuroticism interaction effect was also insignificant, so neuroticism dropped from the framework. Interestingly, the interaction effect of individual risk attitude by emotional intelligence predicted firm performance significantly. This conclusion is supported by a number of studies on the relationship between the two variables (Hillson & Murray-Webster, 2007; Pirayesh, 2014).

Emotional intelligence was then tested for mediation as it had significant correlations with all the other constructs. Emotional intelligence did not mediate the relationship between corporate governance and firm performance as was envisaged; however, it mediated the relationship between individual risk attitude and firm performance significantly. This then was interpreted to mean that individual risk attitude has its effect on firm performance through emotional intelligence. There was, hence, serial mediation of corporate governance by individual risk attitude and emotional intelligence on firm performance (Hayes, 2018).

In the resultant framework, corporate governance positively predicts firm performance, while the constructs of individual risk attitude and emotional intelligence are negative predictors. As individual risk attitude and emotional intelligence increase, firm performance decreases, with the opposite also being true. However, looking at the individual risk attitude by emotional intelligence interaction term, the interaction term positively predicts firm performance. This means that highly emotionally intelligent managers tend to take well-calculated risks which then have a positive impact on firm performance. These managers are emotionally aware of themselves and can effectively regulate their emotions; these qualities shape their outlook on risk taking. This conclusion is in line with Salovey and Mayer’s (1990) view that emotions are adaptive and that managing them can be learnt, thereby bringing about the best outcomes for situations. The model fit was tested through Amos statistical tool. Subject matter experts validated the framework as plausible.

8.4 CONTRIBUTION TO THE BODY OF KNOWLEDGE

The study made the following contributions to the existing body of knowledge:

8.4.1 Theoretical contributions

The study explored new and less researched areas of behavioural and decision-making social sciences. It also contributed to the theory of corporate governance, extending on the already known agency theory through bringing psychology into the theories underlying corporate governance.

8.4.1.1 *Contribution to corporate governance theories*

The study made significant theoretical contributions to the body of knowledge pertaining to the relationship between corporate governance and firm performance. Most studies have accepted agency theory (Jensen & Meckling, 1976; Barl & Means, 1932) as the sole theoretical container for corporate governance. They posit that agency problems can be eliminated or significantly reduced by implementing internal and external governance mechanisms (Glinkowska, 2015; Tamimi, 2005). The mechanisms have been hailed as effective in monitoring and sanctioning agents, prompting them to act in the best interests of the shareholder. This study cites a number of limitations to the sole application of agency theory in corporate governance literature and instead proposes that other theories be incorporated to holistically capture the phenomenon. The limitations in summary are that agency theory (i) assumes that humans are rational beings, (ii) only focuses on financial/monetary self-interest as motivation for human behaviour and (iii) omits the hard to measure qualitative aspects of corporate governance.

In the regression analysis conducted for the study, corporate governance indirectly influenced firm performance through individual risk attitude, whose effect was also through emotional intelligence. This is the greatest contribution of this study to the theory of corporate governance, i.e., the affirmation of the significant indirect effect of corporate governance on firm performance. It confirms one of the gaps of the study, namely, that the relationship between corporate governance and firm performance is not a simple causal relationship as previously reported by many studies but is influenced by other variables, non-tangible and psychological.

The study therefore introduced psychology-based theories that can shed light on corporate governance outcomes. The study proposes incorporating human motivation from all domains or aspects of life with human rationality theories in order to understand the psychological makeup of those charged with management of corporates and by inference, firm prosperity or collapse.

8.4.1.2 *Unbounded irrationality in explaining human behaviour under risk and uncertainty*

The literature reviewed largely focused on the two widely known concepts of human rationality, being perfect rationality or rational choice theory and bounded rationality, with the latter remaining the predominant view of rationality in cognitive psychology (Simon, 2000). This study brought to the fore the somewhat novel concept of "unbounded irrationality". The study offered conceptualisation of decision-making based on various reasoning drivers or motivations (Hobbes, 1968; Freud, 1910; Maslow, 1943). The study posited that human reasoning was unboundedly irrational when it came to decision-making under risk and uncertainty as self-preservation prevailed and behaviour became inconsistent with rational expectations. Subject matter experts by and large confirmed that the concept was new to most of them, with just one out of the seven interviewed having a slight idea of what it was.

A synthesis of adjacent literature (Hernandez & Ortega, 2019) on perfect rationality and bounded rationality led to the following deductions which this study proposed to be a description of the unbounded irrationality phenomenon:

i. Automatic cognitive capacities of the subject that decides.
ii. No regard for knowledge of available actions/alternatives.
iii. Deep-seated self-interests become default preferences.
iv. No regard for availability of resources in the decision-making process.
v. No prior understanding of what will happen if a certain action is taken.

The deductions from literature were explored with subject matter experts. The subject matter experts agreed with the deductions made by the study. The exploration revealed that unbounded irrationality had an undeniable effect on the psychological disposition of humans and hence decision-making.

8.4.1.3 *Psycho-economic insights into corporate governance*

Psycho-economics offers a window through which corporate governance mechanism successes or failures can be understood. Van Rensburg et al. (2013) posit that regardless of advancements made in corporate governance practices, companies are still failing due to persistent agency problems. The study synthesised literature on the corporate governance–firm performance relationship and the following psycho-economic views related to corporate governance shed light on this organisational phenomenon. An elaboration of these suppositions is found in Chapter 3.

i. People drive corporate governance and not the other way around.
ii. Attitudes to risk are in all material respects influenced by individual desires and motivation and therefore dictate human behaviour, impacting corporate governance compliance.
iii. Compliance with corporate governance mechanisms is centred around the outcomes of constant internal psychological conflicts which conflict is fuelled by competing interests.
iv. The associations of the actors in the individual risk attitude network are not predetermined but rather subject to translation, meaning individual risk attitudes are active and dynamic, changing the state of corporate governance at any given point in time.
v. There is significant possibility of irrational thinking in decision-making, impacting corporate governance and firm performance.
vi. Power is distributed amongst the individual risk attitude actors such that no one actor is infinitely more important than the other, i.e., the ANT concept of symmetry. This refers to human and non-human factors influencing corporate governance.

These were the theoretical psycho-economic deductions on corporate governance made by the study.

8.4.1.4 *Risk domains relevant to managerial employees*

Beneficial to similar future studies employing the same population, the risk domains found to be relevant to managers were the financial and business domains. This confirms Hung et al.'s (2012) risk attitude measures employed for the same population of business professionals though in a different research setting. The aforementioned scholars proposed the General Risk Propensity scale which only had financial and business risk attitude domain measures. From the EFA conducted on the risk scale which also included the social, ethical and psychological domains, two factors emerged which corresponded to the financial and business risk subscales. The items of the revised risk scale had factor loadings greater than 0.70 and the item-total correlations were above 0.3 minimum level, unlike those from the other domains.

From this analysis, there is therefore strong evidence that the two domains are the most applicable for the population of business managers. Future studies that seek to test risk attitudes of managers can benefit from this analysis. However, the future studies should take cognisance of the research setting, being Southern Africa, represented by Zimbabwe and South Africa

8.4.2 Practical contributions

The study proffers insights that have ample practical implications for policy makers and organisations, in particular the recommendations in section 8.5.

8.4.2.1 *Corporate governance–firm performance frameworks and application*

The study proposed a framework for the relationship between corporate governance and firm performance which integrated psychological elements' effect on the relationship. Related to the above theoretical contribution, policy makers have the opportunity to enforce good corporate governance practices by introducing psychology in corporate governance mechanisms and recommended practices.

Based on the irrefutable evidence provided in this study of the influence of psychological elements on the corporate governance and firm performance relationship, policy makers and organisations can enforce the uptake of psychometric assessments of relevant aspects before engagement decisions are made. This is especially crucial for management employees and can also be extended to the board of directors.

8.4.2.2 *Organisational training and development: Unlearning and learning risk attitudes*

The study has significant practical applications in organisational training and development, particularly in developing responsible managers. As was discussed in Chapter 3 of the study, attitudes can be learned or unlearned, unlike personalities that are innate. In this study individual risk attitude was defined as *a mental disposition towards risk which can be said to be responsive to human and/or environmental stimuli in which a decision is being made.* Attitudes tend to show systematic and sizable changes in response to specific shocks (Mata et al., 2018) and by inference, impactful new experiences and knowledge. Padan and Nguyen (2020) postulate that beliefs that promote self-interest at the expense of the greater good can be *unlearned*. They further posit that unlearning alone is not enough; it should be complemented with a transformative experience which changes the values and belief system of an individual prior to making a decision. This can also be done by *learning* through new experiences.

A deliberate organisational unlearning and learning of attitudes can foster an atmosphere of responsibility and hence better understanding of risk taking in decision-making and corporate governance objectives. Organisations can therefore incorporate "unlearning and learning of attitudes" programmes in their training in a bid to transform psychological forces that are born of cognitive biases responsible for risk attitudes into behaviours that promote the achievement of firm profitability. Vazsonyi (1974) proposes that there is a need for people to recognise their own irrationality, which would then give birth to a rational approach to irrationality and promote a more aseptic behaviour in decision makers.

8.4.2.3 *Gender inconsequential to risk taking amongst managerial employees*

This study also contributes to the studies of gender and corporate governance and gender and firm performance. Counter to the findings of prior studies that gender had an effect on risk-taking tendencies of individuals (Znajimiecka-Sikora & Salagacka, 2022; Weber et al., 2006; Byrnes et al.,1999), this study concluded that gender was inconsequential to risk taking amongst business managers. The conclusion reached by this study is supported by Kubo and Nguyen (2021) and Temidayo (2022), who also found in their studies on CEO gender and firm performance that gender had no significant impact on organisational risk levels and firm performance. This study therefore has practical implications for policies on effective corporate governance that suggest that female CEOs or managers can improve firm performance due to a conservative approach to risk taking than their male counterparts.

8.4.3 Methodological contributions

In respect of research design, the study employed the less common exploratory mediation methodology.

8.4.3.1 *Exploratory mediation approach*

The study employed an exploratory mediation approach in identifying psycho-based mediators for the relationship under study, which is not common in social and behavioural studies. The exploratory mediation approach moves away from the more conventional methods of hypothesis confirmatory approaches in testing models/frameworks built from theory. These conventional confirmatory methods fall short of correctly identifying mediators, as they are not data driven. Serang, Jacobucci, Brimhall and Grimm (2017) explain that exploratory mediation analysis is a group of methodologies for determining possible mediators in a model. The approach is to identify all possible mediators from literature and subsequently eliminate them as more exploratory enquiries are conducted.

In this study, the framework was first constructed from literature with a single mediator of interest, with more mediator and/or moderator variables being identified and added to the framework or dropped as informed by further exploratory enquiries. Of all the articles explored during the literature review of this research, this study was the only one that employed such a method. Figure 8.1 illustrates the exploratory mediation approach employed in this study.

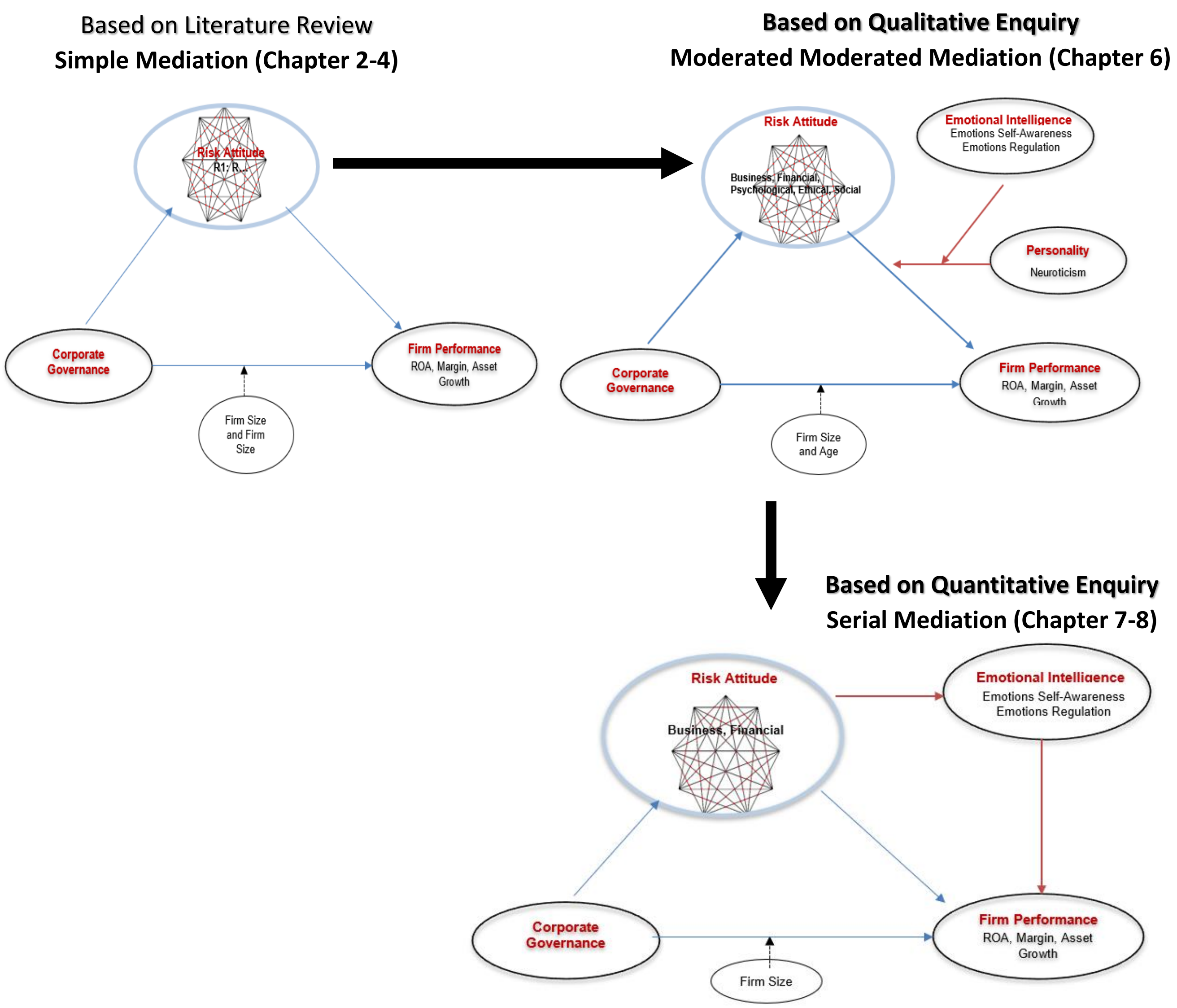

FIGURE 8.1 Exploratory mediation approach

The next section discusses the recommendations extended by the study to different groups.

8.5 RECOMMENDATIONS

This section presents the recommendations that the study can extend to different individuals, groups and/or organisations.

8.5.1 Corporate governance policy makers

Policy makers should introduce mechanisms with which to tap into the psychological processes of people that are charged with stewardship of shareholder wealth in organisations. Understanding the root of managers' thoughts, risk attitudes and behavioural patterns will make major inroads in formulating policies that could prove useful in managing the opportunistic behaviour of man. Policy makers should recognise that agency theory does not represent the entirety or sole conclusion of corporate governance.

Applying the fundamental assumptions of the human motivation and unbounded irrationality theories in policies, such as the assumption that all behaviour originates from self-interest which spans different domains of life, will promote a new and beneficial understanding of the role of stewards in relation to shareholder wealth. Integrating the *"hard" monitoring and sanctioning* corporate governance mechanisms with the "*soft" mechanisms of mentoring the mental disposition* of managers that hinge on social-relational and cognitive-behavioural approaches resulting in better self-governance, may improve firm performance. Social-relational mechanisms are expected to raise emotional intelligence through awareness of the emotions of self and others, while cognitive-behavioural approaches would shape mental and emotional dispositions and hence regulate risk taking and excessive selfishness.

8.5.2 Organisations – Sustaining organisational climate and culture

Psychological elements shape how culture is formed and how it develops and dissipates (McComb, 2022). Individuals bring to organisations their risk attitudes and rationalities which, when integrated with the risk attitudes and rationalities of others in the same organisation, form the culture of that specific organisation. In summary, individual managers' personalities and attitudes influence not only decision-making but also the wider organisational culture. It therefore follows that organisations should be cognisant of the individuals that they take on board as they will contribute to the formation, development and/or disintegration of culture within the organisation.

It might be crucial for organisations to formulate recruitment and selection policies that make mandatory organisational culture specific psychometric evaluations in order to select those employees that best fit the organisational *collective risk attitude and* *rationality* and hence the culture that it hopes to nurture. The specific culture shaped by the collective risk attitude and rationality would influence the extent of risk taking in an organisation and hence self-governance mechanisms advocated by this study.

8.5.3 Individual managers' self-awareness and regulation

Individual managers can be made more aware of "the devil within" so as to self-regulate different psychological forces that emanate from cognitive biases. Most of these psychological elements do not render themselves to objective psychiatric diagnosis and as such only the bearers can have near to absolute knowledge of their psychological makeup and hence disposition. It then follows that this intimate knowledge can be leveraged by individual managers, creating self-awareness and regulation that can nullify self-acclaimed invulnerability to risk or mere stupidity, ultimately benefiting organisations' corporate governance.

8.5.4 Groups – Group dynamics

A team or a group of employees, managers and staff, is complex and has a myriad team/group dynamics at play, since individuals are different and react differently to cognitive bias triggers. According to Buskirk and McGrath (2016), relationships are always reciprocal. Unbounded irrationality allows for the self-understanding of individuals, which can then play a crucial role in moderating group dynamics. Since psychology-based approaches to decision-making allow people to have insight into their own thought processes, each individual in the group is able to self-regulate or moderate his or her own behaviour so as to fit into the group, thereby creating rapport.

In groups there is individual and group awareness of emotions as well as regulation of such emotions. This promotes risk attitudes and corporate governance practices that promote universality and inclusiveness of stakeholders, thereby reducing the self-centredness of individual managers.

8.5.5 Individuals – Leader-follower dynamics

Managers should practise psychodynamic leadership which offers opportunities for leaders, i.e., managers in this case, to understand their followers and know what triggers them, why they respond the way they do and what influences the decisions that they make. Inasmuch as the unbounded irrationality approach allows for self-introspection, it also requires that leaders take a keen interest in the psychological makeup of their followers to be more effective as leaders. This would include assessing their followers' risk preferences and respect for corporate governance in general.

8.5.6 Organisations and individuals – Performance management

Performance management is a process that takes place within the social realities of organisations and as such should be explored from both a technical and a human and/or emotional perspective (Cascio & Aguinis, 2014). This study offers a lens through which "causes" that precede certain actions are understood beyond the normal emotional undertones lacing performance management. Performance management methodologies that do not take into consideration the risk attitudes of individuals being evaluated will tend to analyse "reasons" that proceed from the actions and not the "causes" for those actions.

Understanding the causes of and not the reasons for detrimental decisions made by the individuals being assessed would assist organisations in understanding whether the objectives of corporate governance are understood beyond the easy to measure hard corporate governance mechanisms. Organisations should thus adopt such psychology-based concepts in performance management to be more effective and relevant.

8.6 LIMITATIONS OF THE STUDY

The following were noted to be limitations of the study:

i. Scope

The study was limited to the managerial population in the SADC region, represented by Zimbabwe and South Africa. The specific environment with its associated economy-specific social, economic and political stress factors hugely impacts the psychological disposition of the population. The inferences made from the results obtained from this population might not be generalisable to other SADC countries with no or little participation and or the global context. However, as the resultant framework is an adaptive framework, different reflections can be incorporated based on economy-specific empirical data.

ii. Perception-based measures of firm performance

Perception-based measures of firm performance were employed in this study as Zimbabwean companies audited financial statements were *qualified* and hence they fell short of showing a true and fair representation of the companies' financial performance. Respondents were requested to judge the performance of their companies vis-à-vis industry averages and competition over a three-year period. Perception-based measures are inherently prone to bias or in some circumstances, lack of sufficient knowledge to make a judgement. The study however acknowledged the fact that managerial employees that made up the population were well placed to be in possession of information on the performance of their organisations.

iii. Self-reporting instruments for psychological measures

Self-reporting measures, especially on psychological dispositions of individuals, suffer from systematic biases associated with scale, order and initial perception halo effects (Bargh, 2022). Respondents tend to want to be socially correct and hence responses might not be a true reflection of one's psychological makeup.

iv. Omission of other potential psychological variables of interest

The study omitted other psychological constructs such as hubris, conscientiousness, narcissism, self-grandiosity, nemesis and/or personality as a whole (all the Big 5 elements of personality). The study was instead limited to individual risk attitudes, emotional intelligence and neuroticism. Gordon et al. (2021) argue that studies that only consider one dimension of personality such as neuroticism, usually omit other variables pertinent to organisational outcomes. In addition, the shortened instrument versions might also fail to capture objectively the essence of the matter.

Future studies could test other psychological variables that might impact decision-making or test personality as a whole. Also recommended for study is to employ longer version instruments in measuring self-reporting elements.

8.7 FUTURE RESEARCH

Future research should consider the following aspects as derived from the limitations above, which have the potential to add value to the current study:

i. Replicate the study in other economies to mitigate the issue of environmental and cultural factors and adapt the framework to reflect those economies.
ii. Include other psychological constructs such as hubris and narcissism or test personality in its entirety (Big 5 personality traits). The same can be said for emotional intelligence; this study tested just two variables, i.e., emotional awareness and emotional regulation.
iii. Use more objective measures of firm performance which are informed by audited financial statements. The audited financial statements should however be in compliance with International Financial Reporting Standards.
iv. Consider extending the study to include non-profit making organisations and small and medium enterprise with firm performance measured through non-profitability-based measures where applicable.
v. Introduce methodological variations to focus on specific case studies so as to tap into the collective rationality of an organisation.

8.8 IMPACT OF STUDY - SUSTAINABLE DEVELOPMENT GOALS ADDRESSED

The study addressed the following sustainable development goals (SDGs) of the United Nations:

Goal 1 – No poverty

Goal 2 – Zero hunger

Goal 4 – Quality education

Goal 8 – Decent work and economic growth

Goal 16 – Peace, justice and strong institutions.

The SDGs above are seen to correlate with the global issues of governance, corruption, fraud, corporate collapses and firm economic sustainability, which is the subject of this study. These SDGs foster decent work, economic growth as well as peace and justice among other SDGs. Because the research largely focuses on governance and economic sustainability, it contributes to the Agenda 2063 of the African Union highlighting the need for collective prosperity as opposed to individual prosperity born of self-interest.

8.9 SELF-REFLECTION OF THE RESEARCHER

Based on the six pillars of personal reflections as given by the university, the following is a summary of the self-reflection pillars as they pertain to my research journey.

(i) Research - The research was about the current phenomenon of corporate collapses amid the ever strengthening of corporate governance mechanisms. The topic addressed the phenomenon of individual rationality in decision-making under risk and uncertainty, which in my view spoke to the under regarded possible solution to the problem. The research was a very difficult topic which saw sailing in unchartered waters. Despite some snags in the journey, I dedicated myself to producing a quality, coherent and comprehensive research study. Having taken a pragmatic and subjective view, I employed different methodologies, to include extensive literature review, qualitative and quantitative enquiries so as to draw meaningful practical conclusions and contribute to the existing body of knowledge.

(ii) Strategic acumen - In this regard, I took agility and the capability to adapt as key in achieving the results envisaged. Setting milestones in consultation with my supervisor, helped me execute the research in a strategic manner which ensured that the more important areas were given due care and diligence.

(iii) Ethics and governance - Ethical considerations shaped the research. The 'value driven' axiological assumptions of the study enabled me to maintain the highest ethical standards with ethical clearance having been sought from the SBL Ethics Committee in accordance with the UNISA Policies.

(iv) Networking - Networking was central to my data collection. The data in my research was largely collected from members of the Association of Chartered Certified Accountants (ACCA) of which networking played a big role. I was able to also expand my professional network outside this group through connections being established with Industrial Psychologists as well as other respondents that did not belong to ACCA.

(v) Knowledge and information management - I devised a system of organizing my research information, i.e., literature review articles, interview recordings and survey questionnaires that ensured ease of retrieving. Backup on the cloud was also done in case of mishaps to my primary storage, being my laptop. I also learnt to continuously scan the research space and update both my library and my thesis document with the new information.

(vi) Organisational leadership - Organizational leadership was demonstrated through the effective management of the research study. I effectively monitored myself and continuously researched, incorporating changes into the research document, which in my view showed resilience, which is one attribute of good leaders. At all times I communicated with my supervisor, who was very cooperative, the institution and other stakeholders, as and when necessary.

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APPENDIX 1: ETHICAL CLEARANCE

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Cnr Janadel and Alexandra Avenues, Midrand, 1685, Tel: +27 11 652 0000, Fax: +27 11 652 0299
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SCHOOL OF BUSINESS LEADERSHIP
RESEARCH ETHICS REVIEW COMMITTEE (GSBL CRERC)

24 August 2023

Ref #: 2022_SBL_DBL_004_FA
Name of applicant: Mrs IK Katsande
Student #: 46793542

Dear Ms Katsande

Decision: Ethics Approval

Student: Ms IK Katsande (46793542@mylife.unisa.ac.za , +263 773 933 350)

Supervisor: Dr C Hind, (hindc@unisa.ac.za , 011 652 0318)

Project Title: Corporate Governance and Firm Performance: Recognising the Unbounded Irrationality of Individual Risk Attitudes in Decision Making.

Qualification: Doctor of Business Leadership (DBL)

Expiry Date: March 2024

Thank you for applying for research ethics clearance, SBL Research Ethics Review Committee reviewed your application in compliance with the Unisa Policy on Research Ethics.

Outcome of the SBL Research Committee: Approval is granted for the duration of the Project

The application was reviewed in compliance with the Unisa Policy on Research Ethics by the SBL Research Ethics Review Committee on the 19/08/2023.

The proposed research may now commence with the proviso that:

1) The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.
2) The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3) Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the SBL Research Ethics Review Committee.

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4) An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.
5) The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

Kind regards,

NBW Mitwa

Prof N Mlitwa
Chairperson: SBL Research Ethics Committee
011 - 652 0000/ mlitwnb@unisa.ac.za

Prof P Msweli
Executive Dean: Graduate School of Business Leadership
011- 652 0256/mswelp@unisa.ac.za

APPENDIX 2A: DISCUSSION GUIDE FOR PHASE 1 QUALITATIVE ENQUIRY

A. First Interview: Discussion and Adaptation of Survey Measurement Instrument

- The interview estimated time is 60-90 minutes.

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1. **Discussion on experience and expertise in industrial psychology of the participant.**
2. **General insights into the psychology of decision-making.**

Unbounded Irrationality

- In your opinion, do you believe that human rationality/reasoning is unboundedly irrational?
- What is your understanding of the concept of unbounded irrationality as it pertains to decision-making?
- Unbounded irrationality in people as deduced from the reviewed literature exhibits the following: -
  - i. Automatic cognitive capacities of the subject that decides.
  - ii. No regard for knowledge availability of alternatives.
  - iii. Deep sited self interests/desires become default preferences.
  - iv. No regard for availability of resources, financial, time, etcetera, in the decision-making process.
  - v. No prior understanding of what will happen if a certain action is taken, hence actions are attitudinal as opposed to reflective.

In your opinion, to what extent do you agree with the above statements and why?

- What would you say is the possible link between the unconscious and unbounded irrationality?

Risk taking behaviours in decision-making.

- What would you say are the possible drivers of risky behaviours in humans in general?
- In your view, to what extent are these behaviours influenced by the unconscious?
- In your opinion, to what extent can these behaviours be monitored and regulated by mechanisms of corporate governance such as, having a Board of Directors and limiting CEO tenure or having legal enactments of monitoring?

vi. Specific insights into the three proposed measurement instruments

Presentation of the three questionnaires to the participant.

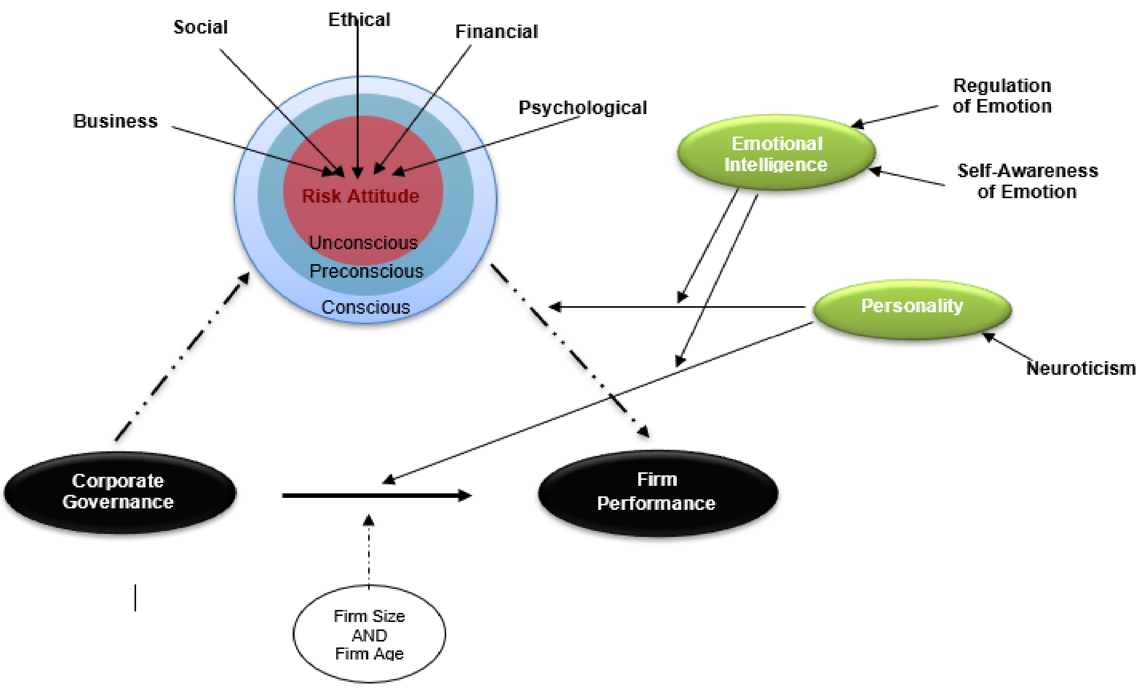
- Based on your experience, are the risk domains identified in each instrument representative of all the risk domains of social life, especially pertaining to managers of organisations?
- In your opinion, what risk domains are relevant for the chosen survey population?
- In relation to the unconscious and unbounded irrationality, do you think these instruments will be able to measure management risk taking tendencies/preferences?

APPENDIX 2B: DISCUSSION GUIDE FOR SUBJECT MATTER EXPERTS' VALIDATIONS

B. Second Interview: Interpretation and Validation of Survey results

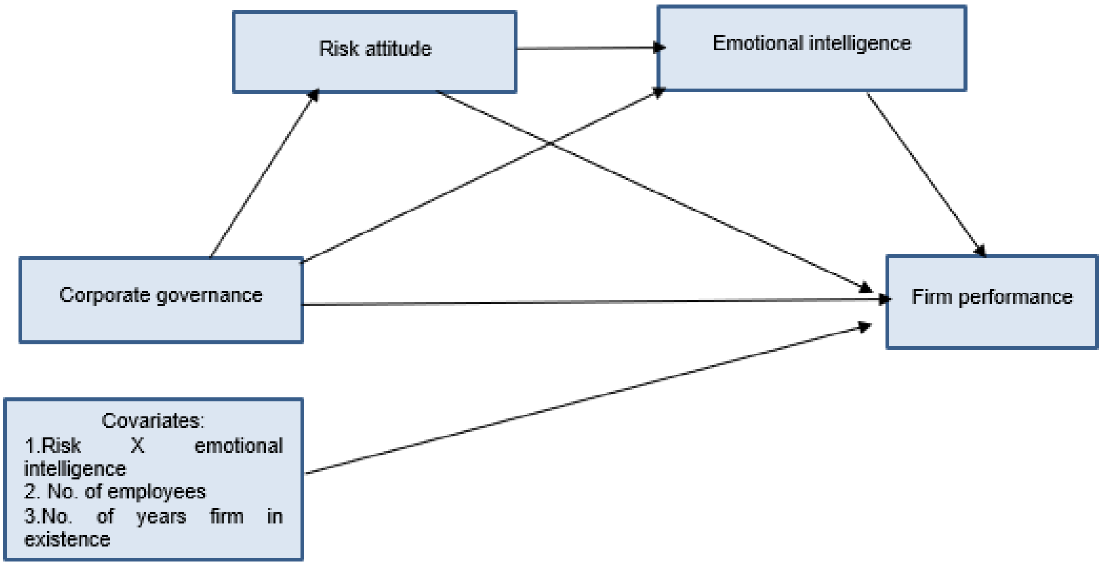
- Brief description of the method of analysis of the survey data.
- Presentation of the analysis results.
- Participant's interpretation of the results based on individual observations and experience in industrial psychology.
- Enquiry into to what extent the results are representative of reality according to the Expert's industrial experience and knowledge.
- Discussion of the Corporate Governance – Firm Performance framework as interpreted by the subject matter expert.

<u>Proposed Framework</u>



Moderated moderated mediated framework for Corporate Governance- Firm Performance

<u>Final Framework</u>



Serial Mediation by Risk attitude and Emotional Intelligence

APPENDIX 3: SURVEY QUESTIONNAIRE FOR PHASE 2 QUANTITATIVE ENQUIRY

A. Inclusion and Exclusion Criteria

Code	Indicate in the boxes provided your Biographical and Organisational Information				
1	Individual role in the organisation	*Executive/ Senior Management*	*Middle Management*	*Junior Management*	*Non-Managerial*
2	Number of years employed by the organisation	<3	*3<x<5*	5-10	>10
3	Sector	*For Profit Organisation*		*Not for Profit organisation*	

B. Biographical and Organisational Statistics

Code	Indicate in the boxes provided your Biographical and Organisational Information				
1	Gender	Male		Female	
2	Age	<30		30-40	>40
3	Education Level	*Diploma*	*Undergraduate Degree*	*Master's Degree*	*PHD/ Doctorate*
4	Industry	…………………………………………………………..			
5	Country	……………………………………………………………..			
CV1	Number of employees (size of organisation)	<100		100-500	>500
CV2	Number of years the organisation has been in operation	<5		5-10	>10

C. Firm Performance

Please indicate, in the boxes provided, to the best of your knowledge your organisation's performance on a three-year average against your closest competitor						
Code		**1**	**2**	**3**	**4**	**5**
		Far below average	*Slightly below average*	*Average*	*Slightly above average*	*Far above average*
FP1	Your organisation's Asset Base					
FP2	Your organisation's Return on Assets (ROA)?					
FP3	Your organisation's Profit Margin?					

D. Corporate Governance

Please indicate with an (x), to the best of your knowledge, how much you agree with the following statements as they pertain to your organisation over a period of three years.						
Code	**Statement**	**1**	**2**	**3**	**4**	**5**
		Strongly disagree	*Slightly disagree*	*Neither agree nor disagree*	*Some what agree*	*Strong ly agree*
CG1	The total number of directors on the governing body/Board is appropriate and sufficient to provide good governance oversight.					
CG2	The governing body is composed of a majority of Non-Executive Directors, most of whom are independent.					
CG3	The positions of CEO and Board Chairman are not held by one individual.					
CG4	The governing body meets frequently enough to ensure effective oversight of the organisation					
CG5	The compensation for the CEO/Executives includes performance-based measures that support positive outcomes across the economic, social and environmental context.					
CG6	The number of years the current sitting CEO has been CEO continuously is within acceptable levels to ensure effective management of the organisation.					

E. Individual Risk Attitude

Indicate, the degree to which each of the following statements describes you. Use the (1), if the statement is a very good description of you (like me) and (5) to indicate it does not describe you at all (not like me).						
Code	**Statement**	**1**	**2**	**3**	**4**	**5**
		Extrem ely Like me	*Moderat ely Like me*	*Not Sure*	*Moder ately Unlike me*	*Extremel y Unlike me*
GRP1	I like to take chances, although I may fail. (F)					
GRP2	Although a new investment has a high promise of reward, I do not want to be the first one who tries it. I would rather wait until it has been tested and proven before I try it. (R) (F)					
GRP3	When I have to make a business decision for which the consequence is not clear, I like to go with the safer option although it may yield limited rewards. (R) (B)					
GRP4	I like to try new things, knowing well that some of them will disappoint me. (B)					
GRP5	To earn greater financial rewards, I am willing to take higher risks. (F)					
GRP6	I prefer a tested-and-tried approach over a new approach, although the new approach has some possibility of being a better one in the end. (R) (B)					

GRP7	I like to implement a plan only if it is very certain that the plan will work. (R) (B)					
GRP8	I seek new financial investments even if their outcomes maybe risky. (F)					
RA9	If it benefits me, I may reveal company secrets to the competitors (E)					
RA10	I may pass off someone else's work as my own (E)					
RA11	I may disagree with an authority figure on a major issue (S)					
RA12	I am able to admit that my tastes are different from those of work colleagues or friends (S)					
RA13	Being afraid of doing something new often makes it more exciting and satisfying in the end. (Ps)					
RA14	While I don't deliberately seek out situations that involve risk, I often find myself in risky situations. (Ps)					
RA15	It's possible that I may choose to evade tax or other regulations that require me to pay money to the authorities. (E)					
RA16	I like the feeling that comes with taking risks (Ps)					
RA17	I may choose a career that I truly enjoy over a more secure one (S)					
RA18	More often than not, I am anxious of choices that I am about to make. (Ps)					
RA19	I do not let the fact that something is considered immoral stop me from doing it. (E)					
RA20	I never let fear or doubt get in the way of my doing things. (Ps)					
RA21	I may speak my mind about an unpopular issue in a meeting at work (S)					

(i) F- Financial, B- Business, E-Ethical, S-Social, Ps- Psychological

(ii) R- Reverse Scoring

F. Personality

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age.						
Code	**Statement**	**1**	**2**	**3**	**4**	**5**
		Extremely Unlikely	*Moderately Unlikely*	*Not Sure*	*Moderately likely*	*Extremely Likely*
P1	Get stressed out easily (+)					
P2	Am relaxed most of the time (-)					
P3	Worry about things (+)					
P4	Seldom feel blue (-)					
P5	Am easily disturbed (+)					
P6	Get upset easily (+)					

P7	Change my mood a lot (+)					
P8	Have frequent mood swings (+)					
P9	Get irritated easily (+)					
P10	Often feel blue (+)					

G. Emotional Intelligence

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age.						
Code	**Statement**	**1**	**2**	**3**	**4**	**5**
		Extremely Unlikely	*Moderately Unlikely*	*Not Sure*	*Moderately likely*	*Extremely Likely*
P1	I know why my emotions change (A)					
P2	I easily recognise my emotions as I experience them (A)					
P3	I am aware of my emotions as I experience them (A)					
P4	When I'm faced with obstacles, I remember times I faced similar obstacles and overcame them (A)					
P5	I have control over my emotions (R)					
P6	I seek out activities that make me happy (R)					
P7	Some of the major events of my life have led me re-evaluate what is important and not important (R)					
P8	I motivate myself by imagining a good outcome to tasks I take on (R)					
P9	I know when to speak about my personal problems to others (R)					
P10	I am aware of the non-verbal messages I send others (A)					

(iii) R- Regulation of Emotions, A- Self Awareness of Emotions

APPENDIX 4: DECLARATION OF LANGUAGE EDITING

MAGRIET ENGEL COACHING

15 August 2023

Ivony Kudzayi Katsande
University of South Africa
Graduate School of Business Leadership

Dear Sir/Madam

Declaration of language editing

I, Magrietha Maria Engelbrecht, hereby declare that I personally read through the thesis:

CORPORATE GOVERNANCE AND FIRM PERFORMANCE: RECOGNISING THE UNBOUNDED IRRATIONALITY OF INDIVIDUAL RISK ATTITUDES IN DECISION MAKING

by **Ivony Kudzayi Katsande** in August 2023 and highlighted language errors.

Yours sincerely

15 August 2023

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APPENDIX 5: TURNITIN REPORT

46793542 DBL Final Thesis

ORIGINALITY REPORT

21%	14%	18%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

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