Multilevel impact of individuals and culture on knowledge sharing in Africa

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Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Philosophy (International Business) at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

27 November 2023

Abstract

Knowledge sharing is the “raison d’être” of the MNE with the flow of knowledge across various business unit and borders being the lifeblood that drives the performance of an organisation. The frequency of knowledge sharing across business units is characterised by the ability of individuals, how motivated they are and the opportunities they are given to interact with other individuals.

Culture is crucial in international business as it shapes business practices and consumer preferences, ensuring successful cross-border interactions. Understanding cultural nuances enables MNEs to build strong and effective global partnerships. Organisational culture in particular fosters an environment of collaboration and open communication, which encourages individuals to share knowledge more frequently. This study and others found that when individuals feel supported within their organisation, they are more likely to actively participate in knowledge sharing.

Through an online survey, 478 respondents provided insights into their levels of competence, self-generated motivation and their opportunity set. The resultant multilevel modelling analysis revealed that: (i) individual’s level of ability is significantly positively related to their knowledge sharing frequency with other business units, (ii) the intrinsic motivation of individuals within the firm is positively aligned with knowledge sharing frequency with other business units, (iii) the level of opportunity of individuals within the firm is positively aligned with knowledge sharing frequency with other business units, (iv) the collaborative nature of organisational culture within the firm is positively aligned with knowledge sharing frequency with other business units, (v) the relationship between collaborative national culture and knowledge sharing was not significant (vi) organisational culture was not statistically significant in influencing the relationship between intrinsic motivation and knowledge sharing frequency, (vii) national culture was not statistically significant in influencing the relationship between intrinsic motivation and knowledge sharing frequency, (viii) well-being among individuals within the firm was not statistically significant with knowledge sharing.

Key findings are positive correlation between individual ability, intrinsic motivation, opportunity, and organizational culture with knowledge sharing frequency. However, organizational and national culture's influence on intrinsic motivation, and individual well-being showed no significant impact on knowledge sharing.

Keywords

Knowledge-sharing

Micro-foundations

Multilevel

National Culture

Organisational Culture

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List of abbreviations

Abbreviation	Long-form
AIC	Akaike information criterion
AJG	Academic Journal Guide
AMO	Ability, motivation and opportunity
AVE	Average Variance
BU	Business Unit
CFA	Confirmatory Factor Analysis
CIB	Corporate and Investment Banking
CV	Coefficient of variation
DMNE	Developed multinational
DV	Dependent Variable
EFA	Exploratory Factor Analysis
EMNE	Emerging multinational
HQ	Headquarters
HR	Human resources
HRM	Human resource management
IB	International Business
IBD	Investment Banking
ICC	Inter-Cluster Correlations
IV	Independent Variable
JES	Job Employment Scale
JSS	Job Satisfaction Survey
KS	Knowledge sharing
M	Mean

Abbreviation	Long-form
Mdn	Median
MNE	Multinational
MNPI	Material non-public information
MLM	Multilevel Modelling
RMLM	Restricted Maximum Likelihood Regression
SD	Standard Deviation
SDT	Self-Determination theory
SEM	Structural Equation Modelling
SUB	Subsidiaries
TB	Transactional Banking
TPS	Total Population Sampling

Chapter 1: Introduction to the research problem

1.1. The background to the research problem

The process of gaining knowledge and understanding is as old as humankind and yet its inner workings remain one of the most pertinent of questions. In today's rapidly evolving global landscape (Zhu & Sardana, 2020), knowledge sharing has emerged as a cornerstone for success and innovation and multinationals strive to understand the biggest drives at the individual, organisational and national level (Argote, 2023). The significance of culture in shaping knowledge sharing practices cannot be overstated as culture is often described as the shared values and beliefs of individuals within a multinational, profoundly affecting how information is communicated and collaborations are fostered (Boscari et al., 2018). This research posits that an understanding of the attributes of individuals on knowledge sharing itself and the cultural impact of their context is essential.

In this modern age, researchers like Meyer et al. (2020) have posited that questions remain around how and why individuals facilitate knowledge sharing and innovation and how this works in multinationals (MNEs) that represent the pinnacle of human cooperation in the modern age.

A significant hurdle faced by organisations in both developed and emerging markets in nurturing their intellectual assets is comprehending how to enhance the sharing of knowledge among individuals in their business units while ensuring that the shared knowledge contributes to the organisation's progress. The effectiveness of knowledge sharing, or its absence, is anticipated to exert a substantial influence on an organisation's effectiveness, capacity for innovation, competitiveness within the market, and perhaps even its long-term viability (Shahnawaz & Zaim, 2020).

Meyer et al. (2020) ascertained that few studies investigate how individuals facilitate knowledge sharing and even fewer deal with emerging market environments. They found that even those that dealt with emerging markets only focused on the Chinese and Asian context while a number looked at the African context.

The study of microfoundations refers to the analysis of how individual actions, decisions, and behaviours at a micro-level e.g. individuals or business units, influence phenomena observed at a macro-level e.g. economies (Contractor et al., 2019). Microfoundations have become a theme

in macro-level management research but the areas of global management and in particular multinationals have been a glaring exception to this movement (Foss & Pedersen, 2019). Georgakakis et al. (2023) found that few studies have been conducted on microfoundations and argue for more work in MNEs on strategic leaders and individuals. Foss and Pedersen (2019)'s literature-based study found that many papers found it structurally easier to focus on the "supra-individual" research subjects such as organisations and teams which are "macro" even though this fundamentally disregarded the role of the individual.

This chapter introduced the background to the microfoundational knowledge lens of the Ability, Motivation and Opportunity (AMO) Framework based on the AMO theory first used directly by Bailey (1993) to measure and test performance. The extant literature has exhaustingly demonstrated that knowledge sharing practices drive organisational performance and thus it was apt to extend the AMO Framework to measure and test knowledge sharing (Castro, 2015; Khedhaouria & Jamal, 2015; Lin & Lo, 2015; Oliva et al., 2018; Singh et al., 2021).

This study extended work done by Gooderham et al. (2022) on a Danish MNE to understand individual AMO explanations of knowledge sharing and who addressed previous gaps in cultural effects identified by Minbaeva et al. (2012) and then went further to incorporate these national culture effects.

The study addressed two of three pertinent gaps identified by literature (Gooderham et al., 2022; Meyer et al., 2020). The first gap was identified as being the measuring of the effects of extrinsic motivation on knowledge sharing directly. This could not be addressed because of research setting limitations. While the firm under study, is the third largest financial services firm in Africa and has made implicit overtures to the importance of knowledge sharing there is no policy on extrinsic reward for knowledge sharing and thus it is not measured.

Literature on the Self-Determination Theory (SDT) found that there was limited evidence relating extrinsic motivation to multiple indicators of wellness or ill-being such as engagement, fairness, development, clarity and satisfaction (Ryan & Deci, 2017). The study uncovered that extensive research and evidence consistently demonstrated across various aspects of life that intrinsic motivation, was related strongly positively to wellness and well-being (Deci et al., 2017; Deci & Ryan, 1980; Ryan & Deci, 2017).

A review of the wellness literature found it to be heavily weighted to the health literature and a review of well-being found it to be incredibly broad with an almost inexhaustible number of variables and constructs describing it and an equally endless number of scales. A lot of research has been done on the topic of well-being and engagement but not much consolidative academic research has been done, thus organisations still struggle to see employee well-being as something that can developed to improve performance (Malik & Garg, 2020; Shuck & Wollard, 2010).

This disconnect has led to a fragmented view of and approach to creating initiatives for employee engagement within firms. Thus, given the nature of the gap and the lack of a consolidated scale, the study used a combined scale of engagement and satisfaction in order to add well-being as a variable that is related to knowledge sharing (Shuck & Wollard, 2010).

The second gap was the lack of microfoundational studies in IB studies in general and in culture and knowledge sharing in particular, while the third gap was the lack of multilevel studies in IB studies in general and in culture and knowledge sharing in particular. The study addressed these by expanding microfoundational AMO research to the less researched emerging markets and in particular African markets by using an African MNE and applying multilevel analysis (Gooderham et al., 2022; Meyer et al., 2020).

Following this context, the research challenge was identified, along with a list of the gaps in the existing literature, which highlighted how this research was conducted and how it will further both academic and practical business understanding of these phenomena.

1.2. Research problem

1.2.1. The importance of microfoundations and multilevel analysis

Multinationals are a fascinating area of study in the context of international business, international management, and global strategy in the world economy as they epitomize their complexity and dynamism. Their operations, workforce and impact transcend national borders and regulations, making them a rich subject for research. Therefore, research on them is especially useful to managers of MNEs. Despite this dynamic relationship between the workforce and the firm, studies in the field have historically centred on analysing the firm as a separate entity, disregarding the role of the workforce (managers and individual employees) as decision-makers.

At both the microfoundational level and the multilevel there is a problem. A survey of global knowledge sharing papers by Foss and Pedersen (2019) found that 46 out of 52 articles that had explored knowledge sharing only examined elements at a single level. The article went to evidence that the data reviewed was mostly at the organisation level, with little research on individuals and microfoundations.

This is particularly a gap in businesses in emerging markets, where decision-making is more centralized among proprietors, senior executives, and relatives (Contractor et al., 2019; Meyer et al., 2020; Palmié et al., 2023). These papers highlight that there has been a significant focus on macro-level factors in MNE research and there is no adequate attention that has been given to research at the micro-level and multilevel; with little importance given to the individual (Foss & Pedersen, 2019).

Critics of the microfoundations contended that the approach ignored the roles of institutions and overlooked macro-structures (Mreji & Barnard, 2021), supporters believed that the focus on the individuals gave fuller explanations (Felin et al., 2015) and that multilevel studies allowed for a closer look at interactions (Foss & Pedersen, 2019).

This lack of micro-level research has led managers at organisations to use grey literature (information generated beyond conventional publishing and distribution channels) to gain a better understanding of microfoundations as this individualistic data speaks to the immediate needs of management in organisations. However, for the literature review, no use of grey literature was made as it does not follow documented systematic approaches Roos Lindgreen et al. (2020).

The dearth of studies in micro-foundations is of economic importance while being an intellectual rarity and presented an interesting opportunity to address a real academic gap in the literature. Contractor et al. (2019) highlighted how this lack of micro-level research presented a practical real-world challenge when taken in the context of Google's 2018 re-entry into the Chinese market. Contractor et al. (2019) summarily contended that Google management decided to re-enter the Chinese market, which was judged to have favourable conditions at a macroeconomic level, such as market depth and GDP. However, this management decision met with significant resistance from more than 1,000 of its staff who at a micro-level did not like the socio-political working conditions of being in China. Google management’s interest in China is not surprising when taken

in the context of Sousa et al. (2021)'s literature review which found that overseas market re-entry has progressively attracted academic interest. However, the micro-level resistance to the decision by Google management is not surprising when considering that authors such as Aguzzoli et al. (2021) and Surdu et al. (2018) all exclusively looked at macro-level data for market re-entries.

With the establishment of a gap in the level of current fields of study and the intention to go deeper at the level of the unit of the analysis, from the firm to the individual, it was useful to allow the study to use a multilevel approach while simultaneously focusing on an area of impact and importance in international business (IB). The micro-level and multilevel decided upon, the scope of the study was sharpened even further onto the MNE by the author.

A review of the old IB literature found that most IB scholars considered the sharing and combining of knowledge as the "raison d'être" of the MNE. In addition, the resulting world economy that has emerged has been described by various academics as a "knowledge economy" driven by technologies based on "knowledge", "information creation" and "dissemination" (Almeida et al., 2002; Buckley & Casson, 2003; Gupta & Govindarajan, 2000; Kogut & Zander, 1993; Mudambi, 2002; Powell & Snellman, 2004).

Grosse (2022) argued in his 2-Stage Theory that domestic firms as they become emerging multinationals (EMNEs) first develop traditional competitive advantages to build up a strong competitive position and internationalize to benefit from superior emerging market capabilities which could be summarised as the ability 1) to deal with volatile conditions, 2) to manage relations with the host government and 3) to build with local communities.

The capabilities mentioned by Grosse (2022) fall under the area of "knowledge management" (KM) described by Teece (2000) as the techniques and routes MNEs use to access or get the most from their dynamic capabilities. Most existing studies focused on the implication of variables on developed multinationals (DMNEs). The importance of microfoundations remains largely understudied in emerging markets and EMNEs (Edeh et al., 2020).

It followed that a second fissure in the gap had formed, and it called for micro-level research on individuals in an EMNE.

1.2.2. Knowledge sharing at an individual level in an African cultural context

Powell and Snellman (2004, p. 201) defined the knowledge economy "as production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally rapid obsolescence". Therefore, this showed that knowledge creation and dissemination can be better scrutinised under a subconstruct of knowledge management called "knowledge sharing" (KS).

Boscari et al. (2018) found that although Hofstede and GLOBE cover worldwide culture in ten regional clusters, three of them (Sub-Saharan Africa, Middle East and Southern Asia) are rarely discussed in IB literature and represent a significant gap for future research. Thus, little remains understood about how knowledge sharing depends on individual capabilities within these under-researched emerging market's "organisational culture ".

With that context, the aim was to address Foss and Pedersen (2019)'s admonishment of a lack of micro-foundations and multilevel work in IM in general and knowledge sharing in particular by studying knowledge sharing at the individual, business unit and national level. This was to be achieved while simultaneously addressing the dearth of emerging market studies highlighted by Meyer et al. (2020). Research on an African EMNE in financial services to illuminate the gap in the literature on the role of the individual in the context of multinationals in Africa would achieve this.

Thus, a third fissure in the gap had opened in the form of the area of micro-level research on individuals' roles in an emerging multinational's knowledge sharing and the impact of culture is under-researched.

1.2.3. Ability, motivation, opportunity (AMO) and well-being as individual explanators

Bos-Nehles et al. (2023) conducted a review of 104 articles that covered the AMO framework in HRM practices over the last two decades and discovered that research has focused on three primary areas. The first area explored AMO variables at an individual level, examining how these factors affected individuals personally, the second path shifted the focus to the organisational level, investigating how AMO variables influenced the company. The third, and less common path, was a vital and underexplored area that combined both individual and organisational level

variables. The integrative approach aimed to address and overcome the limitations found in the first two streams by providing a more holistic understanding of AMO's effect.

This study followed the third and underexplored path, incorporating multilevel modelling and examining three distinct levels – the individual, organisational and national. An adapted AMO framework will be used – thus using ability, motivation, opportunity, and well-being as independent variables and knowledge sharing as the dependent variable. The literature noted that there is a broad array of definitions for ability, motivation and opportunity and in several cases a lack of them (Dastmalchian et al., 2020).

Thus, definitions were set up to avoid such a circumstance and to incorporate the microfoundational element, individual definitions were used. Gooderham et al. (2022)'s definitions of individual ability (competence) and individual opportunity were used here. They define ability as individual ability which includes formal schooling, job-related skills, general work experience, in-company management training and collegiate recognition. Individual opportunity is defined as chances to form social relations, established for other purposes that conversely constitute information channels that reduce the amount of time and investment required to gather information. Separately, intrinsic motivation is defined as the act of conducting an activity for its inherent fulfilment rather than for some other independent consequence by Yildiz et al. (2019). Well-being is defined as a multidimensional concept encompassing the physical, mental and emotional aspects of an individual's life which includes subjective evaluations of satisfaction and engagement (Allan et al., 2019).

As a multilevel analysis is required, cross-interaction effects must be tested and previous studies have used culture (national and/or organisational) as a suitable moderator (Boscari et al., 2018; Swoboda & Sinning, 2020). These moderators and independent variables specifically allow a connection of macro and micro-variables and address the dearth of literature on multilevel analysis linking the individual, organisational and national levels contended by Foss and Pedersen (2019).

With the need to understand the role of the individual becoming highlighted earlier, a microfoundations lens coupled with AMO theory and extended Self-Determination theory should help understand what drives knowledge sharing at an EMNE at the employee level. This poses an under-researched and relevant area of academic study and would be beneficial to firms looking

to drive profitability through the dissemination of knowledge created in firms with emerging market headquarters and subsidiaries.

A comparison of the results for individuals at an African MNE versus those of a European MNE (Gooderham et al., 2022) would be very helpful to senior management and human resource management in Africa who currently find themselves with minimal contextual international business literature. These managers lead organisations in Africa staffed by African individuals, among others, who have different national cultures and thus could be expected to make nuanced decisions that require specific contextual motivations and opportunities to drive performance in their organisation. This would pave the way for EMNE-specific knowledge practice and individual management.

1.3. Research purpose

The purpose of this study was threefold. Firstly, it aimed to address the dearth of literature on microfoundations and multilevel in international business studies, secondly, it contextualised and improved a framework most used to measure individuals and proxies of performance in earlier studies and thirdly, it addressed the lack of convergent and cumulative studies in the international business literature on knowledge sharing.

The research study contributed to the improvement of the existing body of literature in the literature in the following four ways. Firstly, by conducting true microfoundational research and contributing to the field of international business studies, compared to previous studies which lacked true individual measures (Foss & Pedersen, 2019).

Secondly, by expanding the contextual diversity beyond developed markets using African national culture and framework of human resource management and performance by namely testing the AMO theory on knowledge sharing in an African context, specifically with South Africa as a home country and 12 other African countries, 2 European countries and 1 North American country as subsidiaries (Grant & Phene, 2022).

Thirdly, by adding to the body of work on the Self-Determination theory in general by studying motivation in general and specifically by adding the element of well-being (Ryan & Deci, 2017).

Finally, by building on research already conducted to make the body of work done on DMNEs cumulative and confirmatory in the practice of knowledge sharing and convergent by making it applicative in an emerging market context by focusing on multilevel phenomena at the individual level (Meyer et al., 2020).

The study's empirical context is the individual-level knowledge sharing in one of the largest financial services companies in Africa, an MNE that has headquarters in South Africa. The firm was originally multi-domestic but has since established an offshore presence through acquisitions and organic growth. The firm highlighted the desire to "enable customers ambitions, unlock opportunities, invest in employees and find innovative solutions". Thus, given the firm's technology, knowledge and multinational base in Africa, it served as the perfect case study for researching the factors that drive knowledge sharing.

1.4. Research aims and objectives

This research aimed to investigate how knowledge sharing at an African MNE at multiple levels - individual, organisational and national – and across business units occurs and how it is influenced by their individual's abilities, intrinsic motivation, opportunity and well-being. Additionally, it aimed to see how organisational and national cultural contexts in Africa moderate those relationships versus what they have done in previous developed market studies.

The above goals included investigating the multilevel impact of individuals on knowledge sharing within an organisation. The individual aspect involved analysing how individual ability, intrinsic motivation, individual opportunity and individual well-being could relate with knowledge sharing within an organisation. The multilevel aspect involved evaluating the moderating effect of culture on the relationship between motivation and knowledge sharing, with culture being viewed on the two levels of organisational culture and national culture.

1.5. Research questions

The research questions have been developed by reviewing all the relevant literature and gaps. These questions aim to explain the nature of the relationships between individuals, knowledge sharing and culture. The three research questions were informed by the literature review in Chapter 2 and covered in detail with their main hypotheses in Chapter 3:

1. Do individuals have an impact on knowledge sharing within an organisation (Houle et al., 2022; Lombardi et al., 2020; Ryan & Deci, 2017; Yildiz et al., 2019)?
2. Does organisational culture have an impact on knowledge sharing (Alofan et al., 2020; Gooderham et al., 2022; Kubicek et al., 2019)?
3. Does national culture have an impact on knowledge sharing (Chen et al., 2018; Gupta & Gupta, 2019; Kubicek et al., 2019; Nash & Patel, 2019; Swoboda & Sinning, 2020)?

1.6. Theoretical contribution

There has been a recent surge in the microfoundational studies movement in macro management research since the pioneering works of Felin and Foss (Felin et al., 2015; Foss & Pedersen, 2019). However, post the surge, there is a lack of cohesion and depth in the studies, which has led to a lack of real micro-level studies in the international management and business fields, which has been illustrated by reviewing the key literature in the field of knowledge sharing (Chen et al., 2023; Contractor et al., 2019; Palmié et al., 2023).

This study attempted to bridge this gap by addressing the contextual concerns of scholars of macro research by using culture and by conducting multilevel research at individual, organisational and national levels. Secondly, few studies have investigated how individual capabilities drive knowledge sharing at the subsidiary level (Meyer et al., 2020). This study aims to bridge this by investigating how an individual's abilities, motivations, and opportunities (AMO Framework) impact knowledge sharing. Thirdly, few studies look at microfoundations and individuals in emerging markets because of a lack of public sample sets and small sample data (Nuruzzaman et al., 2019). This study addressed this by using this case to analyse a large sample set.

1.7. Business contribution

The study of emerging markets is currently contextual given the geopolitical climate, with United States-China geo-political tensions, EU-US trade disputes, China-India border disputes and many other recent militarily based conflicts (Zhu & Sardana, 2020). With fissures in the global markets, a deeper understanding of what makes developed and emerging markets similar and what makes them different is ever more important. Contractor et al. (2019) assertion about how well emerging market businesses' dynamic capabilities can be explained by the traits and actions of their key managers becomes even more relevant when global politics can be broken into the actions and

reactions of individual actions of the three heads of states of the abovementioned countries. In the same way, the cultural attributes at the government level differ between these emerging and developed world powers, they differ at the firm level in the context of Western “hubris” and Eastern cultural concepts of Hinduism and Confucianism…short-term versus long-term.

Luo et al. (2019)’s reviewed 46 years’ worth of studies on DMNES expanding into developed and developing markets is illustrative of how much work still needs to be done on EMNEs. There are few studies on EMNEs like the firm being studied have internationalised into other emerging markets like Nigeria and developed markets such as the United States of America and the United Kingdom (Liedong et al., 2020).

Beyond just understanding the developed and developing markets, there is a real need for these EMNEs to understand how microfoundations drive knowledge sharing and in effect performance and profitability in those markets (Foss & Pedersen, 2019). As these EMNEs grow into different countries, there will need to understand how the cultures of these additions affect existing relationships between existing organisations and the underlying individuals (Alofan et al., 2020).

1.8. Research scope

The research was centred around the commercial interpretation of knowledge sharing in emerging market multinationals from the perspective of individuals. It looked at how culture at multiple levels from the individual to the organisation and the nation could impact and moderate how ability, motivation, opportunity and well-being impact knowledge sharing. The rationale for the specific scope is outlined in Chapter 4.

1.9. Conclusion

This chapter delved into the central research question posed by Meyer et al. (2020): "How and why do individuals, their roles, and actions facilitate knowledge transfer and innovation within multinational (MNE) subsidiaries?" This question highlights the critical role of individuals within MNEs and their impact on knowledge sharing and innovation.

Several gaps in the existing literature have been identified, firstly the lack of research on microfoundations in international business in the context of knowledge sharing within MNEs. Most studies have traditionally focused on macro-level factors, neglecting the role of individuals.

Secondly, there is a lack of research in emerging markets, especially within the African context, which presents unique challenges and opportunities. Finally, the relationship between individual-level factors, such as ability, motivation, opportunity, well-being, culture and knowledge sharing remains underexplored.

To address these gaps, the study conducted microfoundational research on the role of individuals within MNEs. It extended the Ability, Motivation, Opportunity (AMO) framework to measure and test knowledge sharing, with a particular focus on an African MNE. By doing so, it contributed to a deeper understanding of the factors driving knowledge sharing at the individual, organisational, and national levels.

The research examined the moderating effects of culture, both at the organisational and national levels, on the relationships between individual factors and knowledge sharing and found them to have no effect. This multilevel approach provided valuable insights into how cultural contexts influence the knowledge-sharing process having found that organisational culture influenced knowledge sharing at the second level.

Overall, this study holds the potential to bridge the gap between macro-level and micro-level research in international business, offering a comprehensive understanding of how individuals, their abilities, motivations, and opportunities, impact knowledge sharing within MNEs. It also enriched the literature by focusing on emerging markets, particularly in Africa, and by considering the role of culture in shaping knowledge-sharing dynamics.

Chapter 2: Literature review

2.1. Introduction

The study focuses on how micro-level entities like individuals and managers explain knowledge sharing within the context of organisational and national culture. Figure 1 shows the flow and roadmap of Chapter 2, starting from “Where we are going” through to “Well-being”.

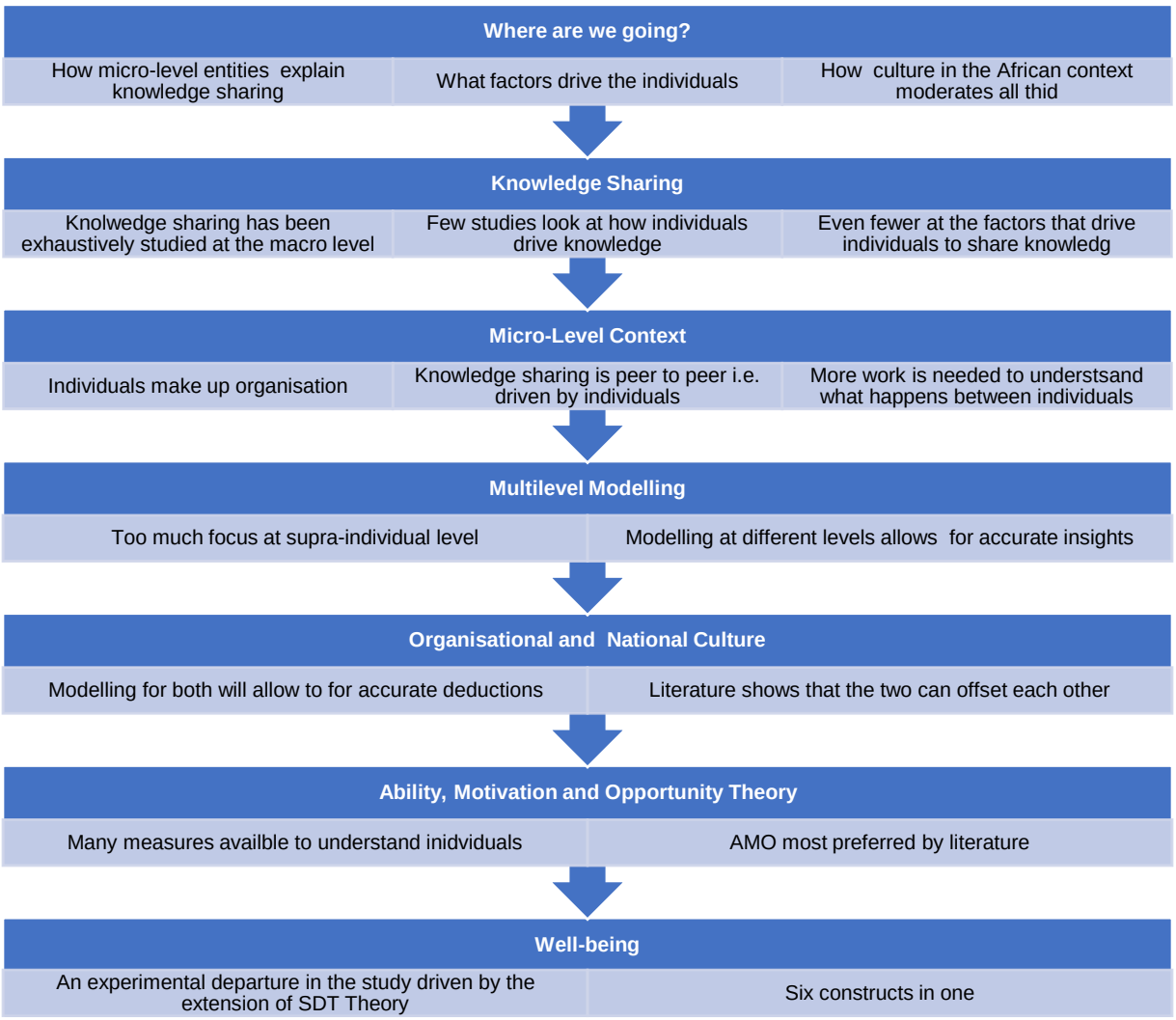

Figure 1: Road map of chapter 2

Contractor et al. (2019) point out that the emerging microfoundations literature asserts “that all relations between macro variables are mechanisms that involve micro variables”, a factor they

find paradoxical as this has heavily influenced general literature and yet largely remains understudied in the global strategy and international business literature.

The fact that microfoundations are lacking makes further study worth considering, given the nature, size and complexity of the multinationals versus the domestic firms. Zhao et al. (2022) conducted a systematic study of 93 articles on EMNEs concerning knowledge sharing over the period between 2000 and 2020 and found a concerning lack of literature on multinationals specifically from Brazil, Russia and South Africa.

Gooderham et al. (2022)'s contextualised Ability, Motivation, and Opportunity (AMO) approach to understanding knowledge sharing caters to the context and multilevel nature of the study. Grant and Phene (2022) argued for the need for a contextualised AMO Framework as it failed to take the social context and the environment in which individuals share knowledge. Gaur et al. (2019) found that knowledge flows in an MNE are affected by individual, firm and country-level factors. Therefore, future research should employ a multilevel design. This research is anchored in this sentiment and employs a multilevel design with organisational and national culture using Hofstede's cultural dimensions theory as applied by Gooderham et al. (2022).

This section rigorously reviews the relevant literature to propose a research model which explains how individuals impact knowledge sharing in the context of a multinational firm working in Africa with relationships between them being studied using the moderation effect of organisational and national culture in an emerging market context.

Following the search methodology adopted by several recently published similar studies (Centobelli et al., 2020; Foss & Pedersen, 2019; Ruiz-Ortega et al., 2023), the systematic review approach was co-opted. For this review, Business Source Complete was used as the information source and only looked at articles written in English. This database offers complete text access to several thousand journals and allows for searching of cited references. The search criteria included filters for peer-reviewed, full text and referenced academic articles dating back to 2018.

The searchable fields that were available, including title, abstract, and keywords looked at top-rated international management, international business, global strategy, and general management journals, particularly publications rated Level 3 and above in the Academic Journal

Guide 2021. The study filtered for journals which had the following terms: “management”, “system”, “business”, “strategy” and “organisation”.

2.2. Ability, motivation and opportunity theory

Several theories can be used to study knowledge sharing within an organisation. Some are listed in Table 1:

Table 1: Macro-level theories on knowledge sharing

Framework/Model	Description
Institutional Theory	How external and internal norms, regulations and structures influence knowledge sharing
Innovation Diffusion Theory	How new ideas and knowledge spread
Resource Based View	What internal resources (knowledge) and capabilities (sharing) of a firm drive competitive advantage
Knowledge Seeking	A systematic approach to managing knowledge within organisations.
Social Capital Theory	Role of social relationships and networks in knowledge sharing
Eclectic Paradigm (OLI)	Use ownership, location and internalization to analyse the motivations of the firm’s knowledge-seeking decisions
Technology Acceptance Model	How the perceived ease of use and perceived usefulness of technology affect employees' willingness to share knowledge

Source: Adapted from papers by Zhao et al. (2022), Pak et al. (2019) and Thomas and Gupta (2022)

In practice, it is necessary and useful to use a combination of these frameworks and models to gain a holistic understanding of the multifaceted factors at play.

Given the focus on microfoundational studies, it was essential to find the best and most useful individual-level theories, thus the theories above were filtered out. Several individual-level theories that explain organisational behaviours such as those listed in Table 2.

Of all the individual-level theories, Yildiz et al. (2019) suggest that the AMO theory provides a more complete viewpoint by taking into consideration both personal (i.e., internal) and situational (i.e., external) determinants of workplace performance, moreover, AMO has been shown to have more cogent and robust hypotheses that can account for the term variation of individual-level behaviour, action and performance concerning knowledge sharing.

Table 2: Micro-level theories on knowledge sharing

Framework/Model	Description
Goal Orientation Theory	How individuals' approach and respond to achievement situations, particularly in educational
Boundary Spanner View	Knowledge transfer depends on both the ability and motivation of individual boundary spanner
Social Cognitive Theory	How individuals learn from observing others and how their beliefs, attitudes and behaviours are influenced by the social environment
Social Exchange Theory	How individuals engage in interactions to maximise their rewards and minimise their costs
Self-Determination Theory	How individuals develop a sense of autonomy, competence, relatedness and drive motivation
AMO Theory	Individual-level factors influencing knowledge sharing

Source: Adapted from papers by Zhao et al. (2022), Pak et al. (2019) and Thomas and Gupta (2022)

Additionally, past research on information transfer and absorptive capacity emphasized the significance of concurrently examining ability, motivation and opportunity to deepen the comprehension of knowledge generation, preservation, and sharing (Minbaeva et al., 2014). This was the first nod to AMO theory being the right framework to use.

The second nod came from studying models that help explain linkages between people management and performance. In such a systematic review by Marin-Garcia and Tomas (2016), it was found that while there are multiple models, four models are most cited in the literature, the AMO Framework, contingent framework, the resource-based view and social exchange theory. According to the review, the AMO framework is a more comprehensive extension of the resource-based view as it adds the opportunity dimension whilst accommodating multilevel analysis better than the contingent framework because it can have multiple contextual factors at each level and social exchange theory measures subjective perceptions rather individual measures which is less suited to the problem of pursuit of microfoundational study. The review noted that the AMO Framework is best optimised when combined with a mediating variable like attitude at the individual level or climate at the organisational level (Block & Pickl, 2014; Demortier et al., 2014).

The literature review found that the AMO framework originates from the work done by Bailey (1993) who combined previous work by industrial psychologists on "ability" and work on "motivation" done by social psychologists with new work on opportunity and a broader application of the first two concepts. This work combined the idea of "opportunity" to deal with the contention

at that time that behaviour while individual in nature also depends on one's environment and the uncontrollable events in it.

The conversation around this gained more momentum as Pfeffer and Veiga (1999) promoted the idea of reorganizing the success of an organisation around its people and approaching an individual optimization perspective. They concluded that the most valuable strategic asset of any firm should be the people and individuals in it. Consequently, if a firm wants to succeed the best way is to invest in understanding and motivating its people.

This work was built upon from 2000 and onwards by several scholars and largely distilled into a framework that could be used to explain the link between people management and performance using the variables: ability, motivation and opportunity (Appelbaum et al., 2000; Boxall & Purcell, 2003; Harney & Jordan, 2008).

Bos-Nehles et al. (2023) conducted a review of 104 articles that covered the AMO framework in HRM practices over the last two decades and discovered that research in the field has focused on three primary areas. The first area explored AMO variables at an individual level, examining how these factors affected individuals personally, the second path shifted the focus to the organisational level, investigating how AMO variables influenced the company. The third, and less common path, was a vital and underexplored area that combined both individual and organisational level variables. The integrative approach aimed to address and overcome the limitations found in the first two streams by providing a more holistic understanding of AMO's impact.

Thus, after exhaustive consideration, the AMO Framework was the best suited for conducting microfoundational research and for understanding how individuals affect knowledge sharing. The AMO model in most studies considers variants of ability, opportunity and motivation at both the micro and macro levels (Pak et al., 2019).

Due to the nature of the study and the fact the MNE under scope is a firm which pays for performance, this presented an opportunity to address gaps in the literature about extrinsic motivation (Gooderham et al., 2022; Yildiz et al., 2019). Thus, the variable of motivation was split into both intrinsic and extrinsic to capture the full range of the self-determination theory.

The AMO framework is not perfect and does not come without drawbacks and criticisms. It has been accused of being too simple and has additionally been criticised for ignoring contextual behaviour in the organisation (Foss & Pedersen, 2019; Gooderham et al., 2022; Peterson et al., 2012). The same authors went further and highlighted that the three elements of ability, motivation, and opportunity are linked and frequently have an impact on one another. It can be difficult to identify and treat each component independently, and changes made to one can have an impact on the others and what works well in one organisation may not work as effectively in another due to differences in culture, industry, or structure. These criticisms were confronted and addressed by the addition of multilevel modelling in the study and moderation of culture at the individual, organisation and national level.

Not only do the three constructs vary with each other, but Najafi-Tavani et al. (2018) found that some of them are moderated by the organisational culture of the firm under study. In their research, they found that opportunity and motivation are moderated by organisational culture specifically. Gagné et al. (2019) described motivation as autonomous and intrinsic and linked it to knowledge sharing and hiding behaviours, finding that they were positively and negatively related respectively.

Lombardi et al. (2020) extended Gagné et al. (2019)'s work on intrinsic motivation and knowledge sharing to include extrinsic motivation. The results reasserted the relationship between intrinsic motivation and knowledge sharing but found that extrinsic motivation had a negative moderating effect on the relationship between intrinsic motivation and knowledge sharing.

2.3. Knowledge sharing

Inkpen et al. (2019)'s paper stated that the sharing of knowledge was the basis of an MNE's competitive advantage and that the very survival of MNEs was bound to their difference in knowledge sharing capabilities. According to Grant and Phene (2022), despite this clear central role of knowledge in the global context, there was a lack of consensus on the nature of knowledge and the literature addressed knowledge with few definitions as an objective, subjective or socially constructed measure with equal indifference. Thus, it was important to adopt a working definition of knowledge and the one used by Stoermer et al. (2021) describing knowledge as data processed by people including thoughts, facts, capabilities and conclusions appropriate for the individual, BUs or MNE performance was more than adequate. Coupled with Stoermer et al. (2021)'s

meaning of sharing which was providing others with task-related information and expertise, and jointly working with them to tackle issues and generate innovative concepts.

Given the magnitude of the knowledge management literature and having defined knowledge sharing to keep the study objective, the researcher started the review at the point closest to “True North”. Thus, the starting point was a review of seminal work done by Foss and Pedersen (2019), who are writers of “Level 4*” articles and global knowledge management academic authorities on microfoundations and international management. This was important to get a sense of the challenges and importance of knowledge sharing. They reviewed knowledge sharing articles from 1998 until 2018 which studied internationals and multinationals and put aside domestic companies as these lacked the global reach of MNEs, a line of reasoning used by work done by Contractor et al. (2019).

Foss and Pedersen (2019) found that concerning knowledge sharing, similar key terms appeared. They focused on the seven most frequently used words “transfer”, “sharing”, “acquisition”, “flow”, “sourcing”, “adoption”, and “seeking” (here listed in the order of their frequency) to functionalise knowledge. The terms were interchangeably used in papers on knowledge and the 308 articles found and revealed study of the subject matter with little accumulation and convergence.

Ahmad and Karim (2019) admonish the lack of qualitative knowledge sharing studies and call for future studies to better explain the relationships between individual dispositions, where these dispositions represent the uniqueness and traits of individuals. Although Foss and Pedersen (2019) decided not to include such qualitative studies as they argued for a preference for quantitative data when researching the sharing of knowledge in a global setting, they did call for studies looking at individual characteristics in the form of microfoundations. Additionally, they focus on those where “knowledge sharing” was the dependent variable and excluded knowledge processes like “learning”, “creation” and “innovation” as each one would require its literature study.

Using the argument of Tranfield et al. (2003) about the benefits of fewer higher quality studies over large numbers of primary studies – they focused on the leading six international management and six general management journals, excluded editorials, reviews, meta-analyses and summaries - and thus found 52 knowledge sharing studies.

The authors then codified the articles above using a Coleman Diagram from a microfoundational perspective. The key findings by Foss and Pedersen (2019) were that 1) there was very little cumulative research being done and thus there was no consistent theory used or aggregate theory building exercise 2) each new study presented different variables and moderators with little cumulative study, 3) only eleven studies looked at knowledge sharing at an individual level, 4) only five studies studied sharing at the team level and 5) only those five were multilevel.

Thus, building on this base of understanding, this review then explicitly focused on knowledge sharing as the knowledge instrument of a multinational. The search used the previously discussed systematic review approach in the Introduction section of Chapter 2; and used the keywords "knowledge sharing" and "multinational" in the title and body of the text respectively filtering for peer-reviewed, full text and reference available articles.

Pervez et al. (2022) authored a conceptual paper that drew on social identity theory and broadened & built theory and displayed national cultural differences and mindfulness. between expatriates and locals influences knowledge sharing positively.

Lee, Yang, et al. (2020) used network learning to frame a multi-method data collection process incorporating interviews, personal observations and survey questions from 337 Korean firms. The team focused on ambidextrous knowledge sharing dynamics at the macro-level between firms in Korea called "Chaebols" due to institutional voids. Rouyre and Fernandez (2019) ran a knowledge sharing protection study among competitors with a macro-level focus. All the above researchers called for studies at the individual level.

Four studies were of particular interest given their micro-level focus. The first, Lindsay *et al*. (2020) focused on 300 people via survey from an Australasian subsidiary and found that at the individual level, knowledge sharing, identification with the work organisational culture and employee retention rose when their supervisors were from a different national culture, displaying the benefits of cultural diversification.

Lee, Taras, et al. (2020) used sample data of 4,037 research and development teams from 1,486 Chinese MNEs from a dataset of an initial 4,457 teams and 1,593 Chinese MNEs, the study drew from organisational theory and knowledge management theory. The authors hired a professional survey team to conduct the massive survey. The study sought to measure the impact of

knowledge sharing on performance at the micro level. An aspect of cultural distance in the place of national culture was used as a moderator on the relationship knowledge sharing and performance was measured. The authors only used one aspect of Hofstede's dimensions particularly, uncertainty avoidance and viewed this as a limitation of their study which is in line with Grant and Phene (2022)'s criticism of a lack of social context in the literature. Critically this study supports the inclusion of the national cultural variable over cultural distance.

Using expectancy theory as a theoretical lens, Pereira and Mohiya (2021) conducted a micro-level qualitative exploratory case study on a Saudi MNE and document analysis of 242 first hand comments about "knowledge hiding" from individuals. The key finding is how employees can hide knowledge and how this was mitigated by organisational support and organisational culture, an element for future study on motivation and how to reduce hiding.

Last but not least, Gooderham et al. (2022) took the cue on the lack of micro-level studies from Foss and Pedersen (2019) by using the AMO Theory and conducted a multilevel approach to understanding the role of organisational culture and national culture on knowledge sharing. The study focused on a DMNE based in eleven countries in Nordic and East European regions with a sample of 1,235 departments and 11,484 individuals from an original group of 25,340 individuals. It used a knowledge sharing survey as a research instrument. While this study looked at knowledge sharing as the dependent variable, it focused on organisational culture and national culture as independent variables and moderators and was multilevel and microfoundational in nature. The findings are pertinent to the question and the author called for more contextual studies, this could be extended to emerging markets.

This study used the AMO framework as a theoretical base to study individual competence and motivation as micro-independent variables and moderators while accounting for the organisational culture and national culture contexts that Grant and Phene (2022) highlighted as the drivers for employee behaviour. This confirmed Foss and Pedersen (2019)'s assertions about microfoundational reductionism in the individual using the AMO framework while showing the multilevel approach to show the significance of organisational culture and national culture.

The finding here was that despite the multitude of studies on knowledge studies few have explained and found how individuals behave and done contextual studies to show how this varies. This supported Grant and Phene (2022)'s call for new research directions and a call for a

multilevel approach to knowledge and its microfoundations. A great research takeaway was the use of the AMO framework and contextualising culture for multilevel applications (Bos-Nehles et al., 2023). An interesting takeaway from the review was that in developed markets as the baby boomer generation retires, massive concerns about knowledge sharing and the potential negative effects of its decline have been raised. EMNEs based in young population countries and regions need to think about how to potentially benefit from this or be left behind (Argote, 2023).

To ensure quality articles and the most updated literature were reviewed, a systematic review approach was followed filtering for peer-reviewed, full text and reference-available articles from 2018. Eleven publications rated Level 3 and above in the Academic Journal Guide 2021 were found, of these seven articles focused on the macro-foundations of factors around "knowledge sharing", and four focused on an aspect of emerging markets (none on Africa), four referenced organisational and national culture. Those articles with significant statistical power, incorporated emerging markets and had cultural factors discussed. Papers that lacked any compelling results and arguments were put aside, for example, Shi and Weber (2018)'s survey of 109 sales team members in Australia whose findings lacked power.

2.4. Organisational and national culture

The review found an abundance of far-reaching literature on culture but only 17 culture articles researched knowledge sharing. Two focused on organisational culture and national culture, five focused on organisational culture, eight on national culture, one addressed traditional culture which is outside the scope of this study and one article a bibliometric study of national culture and expatriates was corrupted on all sources.

Ogbonna (2019) found evidence of a relationship when they drew on social identity theory and organisational theory to investigate why organisational culture resulted in continued disadvantages for ethnic minorities in Western society in terms of promotion and access to opportunity. Later, Wijethilake et al. (2023)'s case study on a Sri Lankan garment manufacturer using fifteen interviews found that organisational culture drove sustainable role changes in an MNE using the competing values framework. While these results appear intuitive, culture doesn't always have an effect as Etse et al. (2021) found from survey data from 322 Ghanaian firms. Their study endeavoured to see how organisational culture and leadership explained the effect of

regulation on sustainable procurement. It found that, unlike the work of the others, organisational culture had no effect at all.

Etse et al. (2021) also found that organisational culture had no mediating effect in their study which supported the limitations of multilevel research being modest effects, as outlined by Dastmalchian et al. (2020) and Stoermer et al. (2021). However, Roscoe et al. (2019) used human resource management (HRM) theory as a lens on survey data from Chinese manufacturing firms and found that green organisational culture positively mediated the relationship between green HRM practices and environmental performance. These mixed results show how the field of organisational culture has not reached convergence.

Boscari et al. (2018) did a structured literature review of national culture in operations management and found that while national culture is prevalent in the literature, the direction and strength of its impact are not well studied as they found contradicting results of the same phenomenon in their review like the one above for organisational culture. This lack of convergence and agreement on the study of culture can be explained by Moore (2021)'s paper which drew from anthropology and used the positive organisational framework in a case study to test national culture's integrating effects post the merger of British and German entities. They found that national culture was not a hard definition and was at times better defined as "acquirer" and "acquired" culture with individual manager's use of the difference having bigger impacts (positive and negative) on actual cultural distance between employees. In a nutshell, the national culture in certain MNEs cannot be disambiguated from the organisational culture of an MNE that represents the national image of the country, in the same way Mercedes is associated with Germany and Ferrari with Italy. The organisational culture of those corporate MNEs cannot be a reliable proxy for the national cultures of the home country.

Diallo (2021) and Vitolla et al. (2019)'s work demonstrated this mixed result and method dynamic, while other studies in the search focused on national culture and its impact and influence on earnings, corporate ethics, finance, supply chains and operations found positive organisational benefits to cultural elements (Chen et al., 2018; Gupta & Gupta, 2019; Kubicek et al., 2019; Nash & Patel, 2019; Swoboda & Sinning, 2020).

The most useful findings of the review were twofold. Firstly, Alofan et al. (2020) studied 126 total quality implementations from MNEs operating in Saudi Arabia and found that configurations of

national culture and organisational culture have different effects on implementation. Additionally, their study revealed that great national culture distance is not a barrier to the transfer of innovation (knowledge sharing) and that organisational culture can offset negative national culture distance. Secondly, organisational, and national culture provide good context on the role of culture as a moderator while using multilevel analysis removes the ambiguity of macro-micro variables for national and individual culture. (Gooderham et al., 2022; Kubicek et al., 2019).

To ensure quality articles and the most updated literature were reviewed, a systematic review approach was followed using the keywords “organisational culture” or “national culture” in the title and “multinational” in the body of the text respectively filtering for peer-reviewed, full text and reference available articles from 2018. Due to the broad nature of culture, the search was conducted on all available high-level material. Seventeen publications rated Level 3 and above in the Academic Journal Guide 2021 were found, of these all 15 articles focused on the macro-foundations of factors around culture, five focused on emerging markets (1 in Africa) and two used some form of knowledge variable.

2.5. Microfoundations and multilevel modelling

The call for microfoundations is as old as the social sciences themselves with calls for microfoundations in macroeconomics beginning in the 1950s (Felin et al., 2015). However, calls for microfoundations in international business studies only occurred two decades ago when Felin and Foss (2005) suggested their inclusion would enrich the understanding of phenomena. Thus, the dearth of microfoundational studies while surprising given that few management fields span more than one level of analysis is understandable when given the context of timing. It explains the use of firms or nations as micro-units of analysis, measures which are supra-individual and not microfoundational (Palmié et al., 2023).

The key to the above is that “micro” describes the characteristics of the decision maker and the employee, the lowest level of reduction in a unit of analysis in an MNE strategic actions, in a nutshell, the study of the individual (Felin et al., 2015).

Nuruzzaman et al. (2019) support this call for microfoundations and investigate manager-level characteristics but also implored the limitations of predicting all employee-level behaviours using the World Bank data. They called for more microfoundational research at actual firms at the

employee level and with a multilevel approach as a gap. This presents a wonderful opportunity to conduct the multilevel approach research.

The multilevel approach allows research to investigate data at both the individual and organisational level, providing shedding light on individual actors and clusters within the organisation and thus solving for the need microfoundational understanding (Argote et al., 2022). After a review of international business literature, Contractor et al. (2019) found there was not enough multilevel research and that more often than not global strategy journals published articles with multiple levels of analysis, looking at individuals, firms and nations.

This gap leads to the subtleties of the need for both microfoundations and multilevel modelling broken down by Foss and Pedersen (2019) who point out that they both analyse phenomena at more than one level and both approaches look at inter-level relationships. The authors supply four reasons why there is a lack of microfoundations. The first reason is that most scholars are "level-biased" and have only conducted analysis at the one academic level. The second reason contends a lack knowledge of "micro" scholarly knowledge like psychology. These two arguments are in sync with Contractor et al. (2019). The third reason is that scholars look at things in a "context" and like to set environmental factors which are "macro" in nature. The fourth reason is the largest factor which is the exorbitant financial cost of implementing a large sample population (N) empirical microfoundational design, especially one that involves collecting data through surveys.

Foss and Pedersen (2019) argued that the fourth reason namely that researchers would need to go into a firm, gather data from multiple levels within the firm and not just one informant at the top, understand the context from more than one country, and the buy-in to achieve that is daunting for most scholars. The above contentions are why microfoundations and multilevel are missing from the literature, not from a methodological and ideological opposition for them but from a barrier to entry perspective of cost, implementation and access.

Ahmad and Karim (2019) called for more widespread use of multilevel analysis in future studies as it helps unpack understanding of how the variables involved in knowledge sharing behave with one another from one level to the next. This presents another opportunity to conduct the multilevel approach research.

However, both Dastmalchian et al. (2020) and Stoermer et al. (2021) raised concern that the benefit of running complex multilevel modelling must be weighed against the modest effects that are quite common in multilevel studies. This limitation will be taken into consideration when the results are discussed.

2.6. Well-being

In mainstream media there has been a notable increase in the attention to the well-being of individuals post the COVID-19 pandemic following an increased interest in mental health in general (O'Connor et al., 2021). Malik and Garg (2020) illuminate the problem in academia and practice lucidly about well-being. They argue that numerous case studies, theoretical reviews and peer-reviewed publications have established the paramount importance of well-being over time and yet the great majority of the well-being-related literature falls short of explaining and essentially presents very little data regarding the field's evolution and application in the workplace. In their paper, they highlighted that existent literature on well-being approaches the subject as if it is a resource rather than as a “state and developable capacity” which can be invested in and grown in the organisation. In the field of knowledge sharing and international business where dispersion and growth are essential, this is a catastrophic failure to launch.

Reardon and Abdallah (2013) found that well-being in the literature as a concept is used interchangeably with satisfaction, quality of life, and happiness among others with numerous disputed definitions. Thus, while well-being is a broad and wide area of the literature with multiple constructs, there is no established scale to measure it.

Given this development, the researcher drew on past studies to find a methodology to enable quality and accumulative work as discussed by Foss and Pedersen (2019). To inform the selection of constructs that could inform well-being, the results of Allan et al. (2019)’s meta-analysis on meaningful work were incorporated. Allan et al. (2019) conducted a meta-analysis where they deconstructed the concept of well-being, to moderate the subjectivity of well-being constructs and find other constructs that better explain the data to build on research in the field. They found that several constructs explained well-being including “employee engagement”, “job satisfaction” and “commitment”. Of interest was that engagement and satisfaction had the strongest factor results.

The results of Allan et al. (2019)'s study are not surprising however as the origins of well-being go back to the seminal work done by Kahn (1990) on engagement. While this was a long time ago, 30 years later, in 2020 in the US, 80% of employees were disengaged at work – costing the US USD605 billion and the global economy USD8.1 trillion, equal to 10% of global GDP (Houle et al., 2022).

Schneider et al. (2018) pointed out that Kahn's early work was qualitative in the 1990s, that successive work focused on burnout as the anthesis of burnout and that it took a decade before the first quantitative work was done by Butler et al. (2005) on measured engagement of any kind was carried out (Bakker & Demerouti, 2017). This lack of understanding in quantitative terms may have led to the continued negative impact of engagement and well-being on the world economy.

In recent times SDT, a theoretical and conceptual framework in psychology, has been researched further by Ryan and Deci (2017) and has been theoretically extended to link people's motivation to their well-being, as individuals are driven by fundamental psychological dependences. This link between well-being and motivation is microfoundational and follows the same path the researchers followed in 1980 when they created SDT and linked motivation to competence (ability) and individual autonomy (Deci & Ryan, 1980).

Given the link between well-being and motivation, well-being was added to the ability, motivation and opportunity as measures of individual attributes. To add quality to the literature, Allan et al. (2019)'s meta-analysis was incorporated and engagement and job satisfaction were used as measures of well-being.

Engagement and job satisfaction were studied by Silic et al. (2020), to look for ways to increase them as it is well understood that they have positive effects on individuals. They found factors like reciprocity extended those effects on both a positive and negative axis. Stoermer et al. (2019) did a study on job satisfaction in South Africa and found that it was a strong predictor of individual and organisational performance outcomes. Rattrie et al. (2020) found evidence that five of Hofstede's six cultural dimensions, namely national culture moderated the relationship between engagement and job resources like individuals. Knowledge sharing is an individually driven outcome and limited literature on a high level exists on how individuals' levels of satisfaction with their employment affect their frequency of knowledge sharing.

Systematic reviews were carried out on “employee engagement” and “job satisfaction” the methodology in the rest of Chapter 2 and of the nine articles found none used any form of knowledge variable. The number of results yielded confirmed the assertion of a lack of applicative research in the field and the missing depth of this research on the EMNE multinational.

Chapter 3: Research questions and hypotheses

3.1. Introduction

The research questions have been developed by reviewing all the relevant literature and gaps. These questions aim to explain the nature of the relationships between individuals, knowledge sharing and culture. This section will discuss the research questions and associated hypotheses. The model used in Figure 2 is based on the AMO Framework (Gooderham et al., 2022). Knowledge sharing is the dependent variable with organisational and national culture serving as moderators and individual competence (ability), intrinsic motivation (motivation) and individual opportunity (opportunity) and individual well-being (well-being) serving as independent variables.

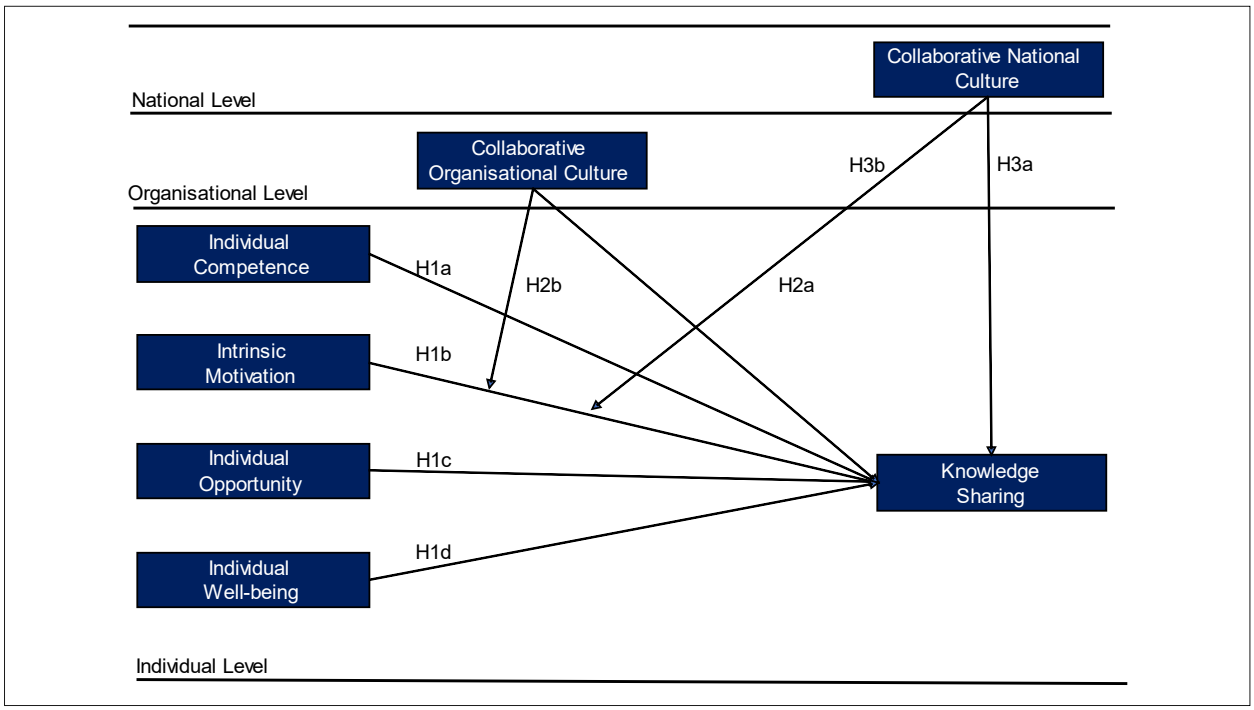

Figure 2: Multilevel model framework of knowledge sharing
Source: Adapted from Deci et al. (2017), Gooderham et al. (2022) and Yildiz et al. (2019)

The overarching objective of this research is to study the relationship between the constructs of individual ability, intrinsic motivation, individual opportunity and knowledge sharing within an African MNE contextualised for African organisational and national cultures.

3.1.1. Research question one

Meyer et al. (2020) in Chapter 2 called for more research on how individuals and their characteristics impact knowledge sharing in MNEs, particularly in emerging markets like Africa. Ryan and Deci (2017) extended work on motivation, one such individual characteristic and linked it to another individual characteristic, well-being. Allan et al. (2019) found that well-being can be explained well by engagement and satisfaction and that they have better more established scales. Yildiz et al. (2019) asked if an individual's ability, motivation and opportunity have an effect on the absorption of knowledge. Gooderham et al. (2022) tested if this could be extended to the sharing of knowledge in developed markets and this research question answers the invitation of comparing the developed market experience to the emerging market context of Africa.

Do individuals have an impact on knowledge sharing within an organisation?

The AMO framework will be used to see how knowledge sharing is impacted by ability, motivation and opportunity at the individual or micro level. Marin-Garcia and Tomas (2016). espouses that ability is represented by individual competence and the more competent an individual is there more like they are to perform well. High performing individuals are more likely to share knowledge with other individuals and are viewed as highly knowledgeable it also follows that highly knowledgeable individuals tend to have confidence in their abilities and are recognised by their colleagues who seek them out to have access to their valuable knowledge (Yildiz et al., 2019).

Thus, the following hypothesis:

H1a – Individual employee's competence is positively associated with the frequency of knowledge sharing across business units.

The Self-determination theory states that individuals differ in motivation. Motivation is a predictor of work performance and motivation promotes knowledge sharing theoretically. Lombardi et al. (2020) specifically studied the effects of intrinsic and extrinsic motivation on knowledge sharing among Italian firms and found that intrinsic motivation led to a buildup of trust and enjoyment. Empirically, colleagues who are intrinsically motivated by the idea of doing rather than being rewarded (extrinsic motivation) tend to engage more freely in knowledge sharing and it is a good predictor of their work performance (Lombardi et al., 2020). Given that knowledge sharing is

inherently costly it led to more sustainable practices while extrinsic motivation resulted in the reduced effects of intrinsic motivation and also introduced unethical behaviours the larger the reward. Felin et al. (2015) found that knowledge sharing is driven by intrinsic motivation among other soft factors such as fairness and loyalty.

Accordingly, it is hypothesized:

H1b - Individual employee's intrinsic motivation is positively associated with the frequency of knowledge sharing across business units.

Individuals who are allowed to engage in face-to-face interactions with teams and colleagues from other business units are more likely to share knowledge, individuals who have had the chance to establish network connections through in-person interactions are more inclined to knowledge sharing, the idea that interactions between managers of different business units facilitate knowledge sharing in an MNE is well understood and researched (Gupta & Govindarajan, 2000; Najafi-Tavani et al., 2018).

Thus, the following hypothesis:

H1c - Individual employee opportunities to interact with colleagues in other business units are positively associated with the frequency of knowledge sharing across business units.

Since Kahn (1990)'s seminal work and the introduction of engagement, lots of work has been done highlighting its importance and further splintering it into various constructs that fall under the overarching idea of Ryan and Deci (2017)'s well-being. It has been established empirically in the last decade that organisations benefit from an engaged workforce through increases in organisational commitment" but little of this insight seems to have filtered into organisational behaviour, change or implementation (Houle et al., 2022).

Accordingly, it is hypothesized:

H1d - Individual employee well-being levels are positively associated with the frequency of knowledge sharing across business units.

3.1.2. Research question two

Does organisational culture have an impact on knowledge sharing?

Gooderham et al. (2022) review several papers that argue that given the mix of subcultures and national cultures in an organisation, organisational culture might be more dominant than the national culture at knowledge sharing especially when individuals in them find it the norm to pursue joint goals. They argue this collaborative culture is both positively aligned to knowledge sharing and motivates individuals to knowledge sharing increasingly often.

This leads to the following hypothesis:

H2a - The organisation's collaborative culture is positively associated with the frequency of knowledge sharing across business units.

Najafi-Tavani et al. (2018) found that in the case of motivation, its effects varied but were always related to a specific organisational culture. They argued that HQ-SB knowledge sharing increased when the organisation had psychological safety and collaboration, which denoted a supportive climate. Given that collaborative organisational culture is both positively aligned to knowledge sharing and motivates individuals to knowledge sharing increasingly often.

Thus, the following hypothesis:

H2b - The collaborative organisational culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.

3.1.3. Research question three

The literature in Chapter 2 found that national culture was positively impactive on earnings, corporate ethics, finance, supply chains and operations (Chen et al., 2018; Gupta & Gupta, 2019; Kubicek et al., 2019; Nash & Patel, 2019; Swoboda & Sinning, 2020). It should follow that there should be a positive relationship between national culture and knowledge sharing and on the

motivation of employees to share knowledge and this hypothesis would address Kubicek et al. (2019) called for multilevel studies on national culture.

Does national culture have an impact on knowledge sharing?

The firm has a wide variety of cultures with offices in Western Europe, Western Africa, Eastern Africa and Southern Africa. The influence of those cultures on knowledge sharing is of interest given the difference between individualistic and collectivistic cultures in an organisation (Chen et al., 2018; Kubicek et al., 2019; Nash & Patel, 2019).

Thus, the following hypothesis:

H3a - A collaborative national culture is positively associated with the frequency of knowledge sharing across business units.

National cultures driven by their individualistic and collaborative properties have been found to strengthen relationships in the HRM practice (Gupta & Gupta, 2019; Kubicek et al., 2019; Swoboda & Sinning, 2020). Given that collaborative national culture is both positively aligned to knowledge sharing and motivates individuals to knowledge sharing increasingly often.

Accordingly, it is hypothesized:

H3b - A collaborative national culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.

Chapter 4: Research methodology and design

4.1. Methodology choice

The methodology section of this study which used a quantitative design described the systematic collection and analysis of data. The methodology was important for uncovering patterns, making predictions, and testing relationships.

4.1.1. Research philosophy

Bonache (2021) stated that in the development of knowledge, there are four philosophies: positivism, interpretivism, realism and pragmatism. The philosophy that was deemed most suitable for empirical research was the positivist paradigm.

This study on knowledge sharing followed a positivist approach which advocated for a deductive approach in the second layer of the research onion (Saunders et al., 2019). This approach was preferred because the firm studied was an EMNE firm which internationalized out of South Africa into several different African countries and grew into North America and Europe. This phenomenon of an MNE growing out of emerging markets into developed markets was interesting given the greater context of the whole world experiencing a period of rising nationalism, increasing populist policies, global fragmentation and deglobalization (Antonsich, 2020).

The study by Sparrowe and Mayer (2011) about how to get published in the Academy of Management Journal it was highlighted that it was important to ground hypotheses and see how they hold for established theory. This study followed the prescribed first stage and went on to generalise the EMNE's observable social realities. The following chapters go on to the next stage and test the relationship between the six constructs (ability, motivation, opportunity, well-being, organisational culture and national culture) and the construct of knowledge sharing using two existing theories, namely AMO Theory and Self-Determination Theory. The work also tested the eight developed hypotheses and gained an understanding of the firm's real narrative with limited human bias.

Thus, the foundation of this study was highly structured with methods that allowed for replication and generalisation. Ryan (2018) concluded that the most applied positivist research design involved the use of explanatory quantitative methods. A more suitable quantitative strategy, being

a mono method that was cross-sectional in nature at a point in time was selected given that all the constructs were widely recognized in the literature review. This approach allowed for a widespread sample and the collection of data to test the proposed hypotheses and answer all three research questions in this study.

A multi or mixed-method approach incorporating individual interviews in the future would further build on the results from this study and was discussed in Chapter 7 (Saunders et al., 2019).

4.1.2. Research assumptions

There were several assumptions underlying the three research philosophies namely ontology, epistemology and axiology which are discussed in this section. Ontology refers to the nature of reality or being in the study (Laasch et al., 2022). In terms of ontology, the study was positivist in philosophy and thus objective and external assumptions were made and these were independent of the social actors with reality being apart from the researcher.

Epistemology refers to the acceptable knowledge or the truth (Powell, 2020). The epistemology was a search for the truth in the field of this study. One assumed that only recorded credible data from observable phenomena could be reduced to simple elements. The focus was on relationships and generalisations with the researcher being independent from what was being researched.

Axiology refers to the role of values or ethics in the research. As this study was focused on knowledge sharing, it was important on an ethical basis to control for the axiological nature of it. The research was undertaken in a value-free way, with the researcher being independent of the data by using anonymity and concealment as done by Lindsay et al. (2020) to maintain an objective stance. The anonymity was important as the individual research subjects could not be linked to the data or results found.

4.1.3. Purpose of the design

This knowledge sharing study though quantitative in nature incorporated microfoundational elements which some considered qualitative and used a multilevel design. This design was informed by debate in the field, where researchers such as Alvesson and Spicer (2019) have

pointed out that management studies are already dominated by quantitative studies and that this is very peculiar given the nascent nature of the discipline. Others like Ahmad and Karim (2019) have admonished the use of quantitative calling for more qualitative studies to research individuals. However, a significant school of thought insisted that the quantitative route was still the right one but must incorporate multilevel and microfoundational approaches to understand the role of the individual more often dealt with in qualitative studies (Contractor et al., 2019; Foss & Pedersen, 2019; Meyer et al., 2020). This school believes that quantitative approaches coupled with actual microfoundational research using multilevel designs address the role of the individual in international business while arriving at useful conclusions about the individual and the multinational.

Saunders et al. (2019) found that for positivist studies, the data collection techniques that were most favourable involved highly structured large samples with clear measurement and a quantitative design, but they could also include qualitative elements. Consequently, the research design was an explanatory study using a deductive approach and then went further to incorporate a multilevel design. This approach was advocated as the firm being studied was an EMNE and given the purpose of the study was to find the impact of individuals, it allowed conclusions and findings at the individual, organisational and national levels while ensuring independence and anonymity from the respondents following the school of thoughts of Meyer et al. (2020), Foss and Pedersen (2019) and Contractor et al. (2019).

This enabled a test of the two theories (AMO Theory and Self-Determination Theory) discussed earlier and an operationalisation of the constructs selected. The research aimed to examine the impact of individual competence, intrinsic motivation, individual opportunity and individual well-being on knowledge sharing while incorporating the testing of the moderating effect of organisational and national culture used by Gooderham et al. (2022).

With EMNEs, de-internationalising, re-internationalising and internationalising in the context of the world experiencing a period of heightened nationalism and deglobalisation, further punctuated by the entrance of new players and the challenging of the old order, it was appropriate to question if the landscape was still the same, if the established theories still held and if findings from developed markets are congruent with findings in emerging markets and in particular an African context (Cuervo-Cazurra et al., 2019; Kafouros et al., 2022).

Edmondson and McManus (2007) highlighted the importance of considering the context of the study in this case Africa, the research setting, and the population being studied in the choice of method. Thus, given the context of the above, a multilevel quantitative study to gain an understanding of the nature of firms and industry was only logical.

4.2. Research strategy

The research study was a cross-sectional survey of a multinational African financial services firm. It was in the form of a survey and was conducted from Headquarters (HQ) in South Africa and distributed to headquarters and subsidiaries electronically via email with the survey running over a month from 1 September 2023 to 29 September 2023. The survey questionnaire applied was written in English given all subsidiaries and HQ conducted business in English.

This strategy was selected after the literature indicated that the best way to collect a large amount of data and information, from a specific population was through a survey instrument sent electronically to collect responses (Etse et al., 2021; Kubicek et al., 2019; Lindsay et al., 2020). Post collection, it was confirmed that this course of action was indeed preferable as it was a quick, inexpensive, efficient and exact means of assessing information about the population.

4.3. Population

The firm described in Chapter 1 was a multinational in 15 different countries on four different continents. The firm was composed of two divisions, one which was multi-domestic and the other that operated as a multinational. The study was focused on the multinational division as it was the only division that had fully internationalised and had operations in all the subsidiaries of the firm and employed 3,410 people. This presented a unique opportunity to collect high value quantitative data, at multiple levels from an internationalising firm. The prospect of access to a unique population and the ethical clearance approval provided the opportunity to sample the whole population.

4.4. Unit of analysis

As this was a microfoundational study, the unit of analysis was individuals, Foss and Pedersen (2019) identified a broader problem in the literature where articles have made use of supra-

individual measures such as business units and teams and paid lip service to the “role of individuals, individual heterogeneity and action, and the importance of interaction between individuals.” This study directly addressed that by studying both individuals directly and their business units separately.

4.5. Multilevel nature of analysis

The study was a multilevel analysis that observed three levels of interactions. It addressed the lack of multilevel literature and tested the strength of the observations that can be assessed by looking at the three levels the individual, organisation and country level (Meyer et al., 2020). Odimegwu et al. (2023) found that although multilevel literature was lacking in international business, the situation was even more dire in Africa, with few multilevel peer-reviewed articles and most only looking at two levels.

4.6. Sample discussion and methodology

This multinational was a high user of information systems which made it a valid candidate for studying knowledge sharing. It is a widely held belief that EMNEs apply more knowledge management and technology tools than local companies and thus exercise a competitive advantage in emerging markets (Liu et al., 2017).

The research was conducted in the context of the financial services industry of developed and emerging markets which are the foundation of the financial system of these markets and economies (Vo, 2020). The global financial industry has made massive investments into knowledge management and sharing activities with the firm understudy also committing itself to be a knowledge leading multinational.

4.6.1. Sample methods

The focus was on a single financial institution, with operations in fifteen countries. The study was on individual factors and their impact on knowledge sharing and moderated for organisational and national culture given the multiple countries of operation. Following research ethics clearance approval, a pilot form was created on Microsoft Forms and the link was sent to 10 members of the Equity Research team. The general feedback was positive with all employees completing the

survey in under 10 minutes apart from noting privacy concerns and not wanting all questions to be mandatory.

After the change was applied which removed mandatory response for completion on the survey, an email with an online questionnaire hosted on Microsoft Forms was sent out on the 1st of September 2023 to the entire population in the division at the national level, within business units and individuals. The 10 employees were included in the new survey as there was no way of filtering them out or being able to distinguish their answers from the other 3,400 employees as the study was anonymous. As the study was sent out via group communications all employees received the email directly. Given the large number of responses from the population, the ten pilot responses will not affect the results of this study.

4.6.2. Sample size

The sample size was based on the 3,410 employees in the EMNE. The online survey was sent to the emails of all 3,410 employees. The system indicated that of 3,410 emails sent, 1,118 were read. Given, that 478 questionnaires were completed, there was a response rate of 42%. Knowledge sharing studies that used TPS such as Lindsay et al. (2020) who had a 25% response rate and (Yildiz et al., 2019) who had one of 46%, both argued these rates compared favourably with equivalent empirical studies in past literature. Unlike, most studies in the literature, there were no reminders sent out as the firm was running colleague experience surveys at the same time and did not want to inundate employees with communication as they believed this desensitised responders and reduced response rates.

4.6.3. Sample technique

Total population sampling (TPS) empowered the researcher to make statistical inferences about the employees (Saunders et al., 2019). TPS was preferred over simple random sampling and probability sampling as the population was heterogenous with large age, racial and national differences and the fact that sampling the entire population eliminated any potential sampling error. TPS allowed the researcher to get deep insights and reduced the risk of missing potential insights.

TPS falls under non-probability sampling and results in analytical generalisation rather than statistical generalisations. Yildiz et al. (2019) surveyed a European firm with 2,400 employees, lower than the 3,410 employees in this study. They argued that even though a case study on a single DMNE limited generalizability, the design also yielded significant benefits such as controlling for unnecessary sources of variation from organisational-level factors such as culture and allowing for intra-organisational variation to be measured and increasing the response rate that would have been lost in random sampling.

4.7. Research instrument

Gooderham et al. (2022) argued that an effective tool for explanatory research instruments was a company survey questionnaire. Using an adapted survey questionnaire, a pilot of the survey instrument was conducted and used to pre-test a small group of ten employees in two different business units to obtain feedback from individuals in different environments and with different mindsets to make sure that the survey instrument was understandable across the firm. The major concern raised by the subjects was fear of lack of anonymity given the small sample of ten. This fear was allayed once it was communicated that the main survey would include the whole of the division.

Following the recommendations by Saunders et al. (2019) the Knowledge Sharing Survey used parts of questionnaires from other highly rated studies to measure the constructs identified. No one study had all the constructs included in this study (knowledge sharing, ability, motivation, opportunity, well-being, organisational culture and national culture) in one questionnaire but sourcing them from past literature ensured content and construct validity, additionally, reliability and validity were tested in section called Reliability and validity testing. For completeness, the survey introduced an explanatory variable, well-being, composed of other variables supported by the literature and from known scales.

4.8. Measures

The measures have been taken and adapted from earlier studies, in which multiple items were based on a 7-point Likert-type scale (Deci & Ryan, 1980; Gupta & Govindarajan, 2000; Yildiz et al., 2019). The Knowledge Sharing Survey questionnaire can be found in the appendix with the

actual items to be evaluated. Surveys such as those from Hofstede (1983), O'Reilly III et al. (1991) and Gooderham et al. (2022) were employed in the design of the survey instrument used.

4.8.1. Dependent variables

The dependent variable under study was knowledge sharing which was defined in the literature review by Stoermer et al. (2021) as data processed by people including thoughts, facts, capabilities and conclusions appropriate for individual, BUs or MNE performance which was provided to others for them to tackle issues and generate innovative concepts. The dependent variable, knowledge sharing, has been described as the lifeblood of the MNE and thus makes sense to be the variable to test against other phenomena involving the MNE (Meyer et al., 2020; Zhao et al., 2022).

4.8.1.1. Knowledge sharing across business units

This was the dependent variable and measured knowledge sharing across business units within the firm. It was adapted from Gupta and Govindarajan (2000) methodology that used six items to measure the dependent variable on a 7-point scale from “never” (1) to “very often” (7). This scale attempted to account for a limitation pointed out by Gooderham et al. (2022) when they used a four item scale, as the scale did not consider the possibility of particularly strong or weak bilateral flows of knowledge across the business unit level. The main adaptations were two additional items which directly asked about the transfer of knowledge about relationships and operational knowledge between business units which would broaden the understanding of knowledge sharing. A sample item from this instrument is “How often do you share knowledge with other business units about customer groups and markets?” The items included in the scale are found in Appendix B.

4.8.2. Independent variables

Dastmalchian et al. (2020) in a review of 110 quantitative studies on AMO theory, found that 43% did not define the variables being discussed. 41% did not define ability, 89% did not define motivation and 40% did not define opportunity while up to 52% did not use any theory. This lack of definitions in the past literature is addressed in Chapter 1 in the section called Ability, motivation, opportunity and well-being as individual explanators.

4.8.2.1. Individual competence (ability)

This misspecification partly explains what Marin-Garcia and Tomas (2016) earlier outlined in their systemic review, which showed that there were multiple measures of individual ability with little consistency among studies and very little aggregation in understanding as even in practice different firms use their measures of individual ability. For illustrative purposes Yildiz et al. (2019) uses absorptive capacity while Gooderham et al. (2022) uses competence. To address this lack of continuity and specification in the research, this paper used a proved scale in order to address the lack of cumulative research and used Gooderham et al. (2022)'s ability four items to measure individual competence with a yes scoring a "1" and no scoring a "0". A score counts the number of confirmations to a indicate company expert from "0" to "4". A sample item from this instrument is "Do you have a master's degree? (Individuals with at least a master's degree, those with one in progress counted)" The items included in the scale are found in Appendix B.

4.8.2.2. Intrinsic motivation (motivation)

Motivation has long been considered a fundamental driver of knowledge sharing in the literature (Argote, 2023). The Self-Determination Theory (SDT) was a theoretical and conceptual framework in psychology that emphasized the relationship between individual autonomy, competence and human motivation. It was created by Deci and Ryan (1980), and since then has been extensively researched. In SDT, people's motivation and well-being are driven by their fundamental psychological needs. SDT also looks at the variables that affect the level and type of motivation that different people experience. What matters most is that SDT discriminates between intrinsic and extrinsic motivation.

This study looked only at intrinsic motivation and did not look at extrinsic motivation as described by Yildiz et al. (2019) as individuals are not explicitly compensated for knowledge sharing. Intrinsic motivation is the inherent drive that an individual must perform a specific task without the aid of outside rewards or incentives. It is the desire to engage in a behaviour for the innate delight, fun, or personal fulfilment it offers. Extrinsic motivation is one in which people are motivated more by the external benefits, incentives, or repercussions of their actions than by the intrinsic satisfaction or enjoyment of the action itself. Extrinsically motivated individuals are thus motivated by outside forces or material benefits, such as cash, accolades, grades, promotions, or recognition, as opposed to their internal desires or interests.

Using Yildiz et al. (2019)'s four items, respondents were asked to score the reasons they shared knowledge with others. A 7-point scale ranging from "strongly disagree" (= 1) to "strongly agree" (= 7) was used on individuals. A sample item from this instrument is "I find it personally satisfying." The items included in the scale are found in Appendix B.

4.8.2.3. Individual opportunity (opportunity)

This measured what proportion of the three opportunities individuals used to interact and develop relationships across business units. It measured whether individuals participated in job moves across business units (e.g., grad programs), general training and seminars. This was done using three items to count the number of interaction activities in which the individual had engaged with other business units from "0" to "3" (Gooderham et al., 2022). A sample item from this instrument is "Have you participated in job rotation across different business units?" The items included in the scale are found in Appendix B.

4.8.2.4. Well-being (engagement and satisfaction)

The original "Job Engagement Scale" (JES) was created by Kahn (1990) and had 18 items. Since then, several scales have been created covering wellness, engagement, reward, fairness, development, clarity and satisfaction. Arguably the most popular scale among all of them in HR practitioner circles is Spector et al. (2019)'s "Job Satisfaction Survey" (JSS) which has 36 item scales and never made it to a rated AJG peer-reviewed journal. Revealing an interesting disconnect between academic research and practice. Even though exhaustive research in each of the silos of well-being, engagement, reward, fairness, satisfaction and commitment shows general organisational benefits (Houle et al., 2022). This indicated that while this topic is in the popular domain more academic and empirical work must be done to solve for engaging individuals in the workforce as the cost of not doing so is remarkably high.

Thus, the variable of well-being was created using fourteen items from scales that measure satisfaction and engagement variables. As knowledge sharing studies involving well-being scales construct were not found and thus specified scales could not be applied that mirrored the AMO Framework. The study used fourteen items adapted from the JES, JSS and the firm's previous Employee Wellness and Engagement Surveys that measured engagement and satisfaction. Due

to privacy, the firm's regulatory and compliance concerns could not release previous questions, results and data for use in this study. A 7-point scale ranging from "most uncharacteristic" (= 1) to "most characteristic" (= 7) was used on individuals. A sample item from this instrument is "I am proud to work for my company." The items included in the scale are found in Appendix B.

4.8.2.5. Collaborative organisational culture

O'Reilly III et al. (1991)'s measure of organisational culture profile was used to measure the degree to which individuals perceived their business unit's collaborative culture. The four items measured the independent variable on a 7-point scale from "most uncharacteristic" (1) to "most characteristic" (7). A sample item from this instrument is "My organisation works in collaboration with others." The items included in the scale are found in Appendix B.

4.8.2.6. Collaborative national culture

The study used two items to try to approximate the national culture of individuals. Both items were created from Hofstede (1983)'s well understood measure, which used a national-level individualism scale (ranging from 0 to 100) to measure individualism.

When this measure was reversed it could be used to measure collaboration or collectivism as done by Gooderham et al. (2022) when they adapted the scale from Hofstede to operationalize the concept of a collaborative culture at the national level by reverse-coding Hofstede's individualistic measure into a collaborative or collectivist one in order identify the prosocial behaviour of knowledge sharing of individuals with other business units.

Thus, when the measure is reversed, a high score is regarded as a communal culture. This is demonstrated by a strong, sustained dedication to the member "group," which could be a family, an extended family, or extended relationships which in the study were colleagues from business units. In a collectivist culture, loyalty takes precedence over most other social norms and laws. Everyone in the organisation accepts responsibility for other group members, which develops strong ties.

Thus, offices in Mozambique and Ghana had the highest collaborative scores while the United States had the lowest. Due to the nature of the period of Hofstede (1983)'s study, data on African

countries was limited at the time but various studies have adapted and increased the number of countries from the initial 40 profiled to 102 countries (Minkov & Kaasa, 2022). Four countries of the 15 country offices Botswana, Mauritius, Seychelles and Uganda had no scores, however, Rarick et al. (2013) advised that researchers allocate the score of the region or the closest similar neighbouring country to the unprofiled country. Thus, Botswana received Namibia's score and Mauritius has a population mostly made up of Hindus thus India's Score and Seychelles and Uganda received the East African region score. While one item tests individuals' nationality to establish the collaborative nature, the other item tests the location of their office to see how the national culture of the office moderates for the same collaborative effect. A sample item from this instrument is "What is your nationality?" The items included in the scale are found in Appendix B.

4.8.3. Control variables (characteristics)

The control variables of gender, tenure at the firm, tenure in the industry, nationality, department (business unit), country location and department size were used (Gooderham et al., 2022). The items included in the scale are found in Appendix B.

4.9. Data collection process

To ensure content validity, the data was obtained through one source, the knowledge-sharing survey, with 44 questions in all. The items tested and the survey itself can be found in Appendix B.

The subjects were all 3,410 employees of CIB and were invited to take part in the study via a standard email that explained the purpose of the research and outlined the process. Those who agreed to participate were required to sign a consent form electronically with a simple click of a button and the survey started after. The survey began on the 1st of September 2023 and ended on the 29th of September 2023. The email itself can be found in Appendix I.

Of the 478 responses, eight respondents exceeded 1 hour to be completed while the remaining 463 respondents completed the survey in an average time of 8 minutes and 53 seconds.

The Microsoft Forms survey collected data that was downloaded into a CSV file. As all questions were not marked as required to allow comfort in the release of information, there was some

missing data which was expected. However, the missing detail was minimal, with no effect on the output and losing the contributions of all respondents for one missing data point was not prudent. Thus all 478 responses were used.

The respondents were asked about their knowledge sharing characteristics, their levels of motivation both on self and pay, what opportunities they had received within the organisations, their levels of engagement, and how satisfied they were. In Microsoft Excel, for each descriptive question in the demographic section, the individual opportunity and individual competence were coded with a numeric value to facilitate statistical analysis. This approach covered questions about gender, tenure at the firm and in industry, expert status, master education, opportunity/competence inputs, status, nationality, location of the office, business unit and team size (Saunders et al., 2019).

4.9.1. Data bias

To avoid biases in the search process various prescriptive remedies were applied using the implementation guidelines from Steel et al. (2021)'s award-winning meta-analysis work. The study dealt with availability bias by not using grey literature to fit the literature review to the objectives, a measure discussed in Chapter 1 in the section called The importance of microfoundations and multilevel analysis. Cost bias was avoided by accessing pay-walled journals which were available using Gibs Business School access and research portal access provided by the MNE understudy.

The research went further and to avoid familiarity bias, the study consulted journals not only from international business but from fields including healthcare, strategy, mathematical sciences and other non-business databases. The Matthew Effect, known as "The Parable of Talents", was mitigated by not excluding low-citation sources and rather focusing on the quality of journals to Level 3 in AJG and above. The one bias that was not accounted for, was the language bias as the study was limited to searching English journals, a clear limitation.

4.10. Data analysis

The data analysis process was conducted in four steps. The process is outlined in Table 3 and was iterative rather than fully linear in process. It started with Preliminary Analysis, Descriptive Statistics (Exploratory Data Analysis), Statistical Analysis and then Multilevel Modelling.

Table 3: Data analysis phases

Stage	Tools	Key Steps
Preliminary Analysis	• Microsoft Excel • IBM SPSS • Stata	• Data Preparation & Coding • Level Factoring • Sample Justification • Data Cleansing • Country Specification
Descriptive Statistics (Exploratory Data Analysis)	• Microsoft Excel • IBM SPSS • Stata	• Variability • Skewness • Kurtosis • Mean Measures
Statistical Analysis	• IBM SPSS	• Exploratory Factor Analysis • Confirmatory Factor Analysis • Common Method Bias • Correlation
Multilevel Modelling	• IBM SPSS	• Correlation • Model Specification

4.10.1. Preliminary analysis

Once the survey closed, the data was exported from Microsoft Forms to Microsoft Excel. Completeness of the questions and response rates were analysed; while unengaged respondents were reviewed and not found. The text and responses in Excel were cleaned and then recoded. Categorical data was coded for use into factor levels, using Stata. Country level and other variables such as gender data were recoded. Given the use of multilevel design and clustered nature of data, sample justification was used and through the model building and dataset conditions responses were discarded and justified. No free text options were included in the questionnaire and thus coding was straightforward, limiting the introduction of errors.

4.10.2. Descriptive statistics (exploratory data analysis)

All survey questions were evaluated using a 7-point Likert-type scale, with one being "strongly disagree, “never” or “most uncharacteristic” and 7 being "strongly agree", “often” or most characteristic”. These scales were found in prior empirical studies and the items in the hypothesized relationships were adaptations of existing measures from the literature (Foss & Pedersen, 2019; Gooderham et al., 2022). The characteristics of the sample were checked to see if the variables met the assumptions required for statistical tests. Responses were put through measures of central tendency, dispersion, kurtosis and skewness and for those relating to demographics; frequency statistics and percentages were used.

4.10.2.1. Ordinal data treatment

While Gooderham et al. (2022) used measures of central tendency on ordinal data, Stoermer et al. (2021) did not use or provide any measures on Likert scales and inferred no meaning, this is illustrative of the tension and disagreement in the literature about whether a study can use a measure of central tendency of ordinal data.

This debate can be explained by Stevens (1946)’s seminal work on the theory of measurement scales where he discussed the ambiguity in measuring and conducting statistics on ordinal and interval scales. His work suggested that for interval and ratio scales where the differences between values are meaningful and consistent, the use of means, standard deviations, rank-order correlations and product-moment correlation was appropriate. However, for ordinal scales, where the ranking of data points is important but the intervals between them are not uniform, he suggested that ordinal scales use medians and percentiles while interval scales.

While the debate is mute in hard sciences, almost 80 years after the paper, his methodology remains a large point of contention when measuring human behaviour using multiple points for ratings. Many international business studies use Likert data and apply measures of central tendency to express views and interpret phenomena such as Gibson et al. (2019). To interpret the data, this study collected ordinal data using measures of central tendency following the researchers who are in support of the use to provide more understanding.

4.10.3. Statistical analysis (factor analysis)

Reliability and validity are important to ensure that instruments measure what they are intended to measure. Cronbach's alpha and Macdonald's Omega (composite reliability) were used to measure the internal consistency of the questions. In the multilevel design literature, researchers account for the average variance explained in the data by the individual items making up a construct (an explanatory variable), by using an exploratory factor analysis (EFA). They follow this up by using a confirmatory factor analysis (CFA) to identify and extract the latent (underlying) constructs that optimally explain the total variance in the constructs of the explanatory variables by the individual items making up the variable (construct) (Gooderham et al., 2022; Stoermer et al., 2021).

In this study, the EFA was run to find the average variance explained by the items making up each of the constructs, these being: knowledge sharing, intrinsic motivation, collaborative organisational culture and well-being. To identify the number of latent components making up a construct, a scree plot would have acted as a guide, but proved unnecessary given that the study found and extracted one component for all but one construct. Only well-being had two constructs which were both valid and reliable and explained 50% of the variation. Thus, the purpose of CFA, which is to extract a single measure for each of the constructs was primarily achieved using EFA. In Chapter 5, the EFA results are viewed as CFA results for all the explanatory variables tested.

Common method bias which was understudied in the literature was tested by Harman's single-factor test (Bozionelos & Simmering, 2022; Kock et al., 2021). Correlation tests of the dependent variable, independent extracted latent constructs, and the sum of scores of the variables were carried out to assess the strength of the relationships between each pair of variables and identify the possibility of multicollinearity.

4.10.4. Multilevel modelling

Hong et al. (2009) concluded that multinationals are a reliable source of data for knowledge transfer and sharing. The multilevel nature of the hypotheses and nested data called for a multilevel regression model (MLR) which depending on the literature is sometimes referred to by other names including hierarchical linear modelling, random coefficients regression, mixed effects modelling, mixed determinants modelling, or multilevel modelling.

Past studies have argued that when considering multilevel hypotheses and macro-micro natures, a random coefficients model would be necessary and the coefficient of the moderator should vary across business units and countries (Gooderham et al., 2022; Preacher et al., 2016). Steel et al. (2021) argue for random-effects instead of fixed-effects, the use of restricted maximum likelihood regression (RMLM) to account for clustering and specific small samples at certain country levels all in the form of a hierarchical linear model with variance decomposition at the levels of the individual, organisation, and nation.

4.10.5. Standardization

Standardization in statistics involves adjusting various variables to a uniform scale. Generally, this is done by computing the mean and standard deviation of each variable. Rattrie et al. (2020)'s study used an unstandardized effect size to quantify the magnitude of the strength of the relationship between the individual variables and knowledge sharing. They expressed the original units of the variables being studied. In this context, the unstandardised effect was preferred as subject matter experts in HRM could interpret and understand the magnitude of the effect directly in the context of their field.

Gooderham et al. (2022) used standardised effect size as this technique enabled the comparison of scores across diverse types of variables. This study used variables with units of analysis that were difficult to compare, thus standardisation was the preferred method.

Initially, the data which depicted bivariate correlations, central tendency and standard deviations in the correlation matrix was unstandardised. However, before the models were run for the hierarchal linear model, all variables were standardised with a mean of 0 and standard deviation of 1, as the model needed to include the interaction effects of variables with different scales.

4.10.6. Data quality and conclusions

The quality of a research study was dependent on the reliability and validity of the data and analysis (Bonache, 2021). All the items in the hypotheses were from scales and adapted and used in prior empirical studies. The data came from the knowledge survey, and confirmatory factor analysis was conducted to assess reliability and validity. The measures reported were Cronbach's Alpha, Macdonald's Omega (composite reliability) and average variance extracted which were

measured on the items. Cronbach's alpha assesses reliability by comparing shared variance or covariance, within the items making up an instrument to the amount of overall variance (Collins, 2007). Cronbach's coefficient alpha is normally used as a means of describing the reliability of multiitem scales (Stemler, 2004).

A prevalent issue of methodology in organisational literature is the potential for observed findings to be a result of common-method bias or mono-method bias, especially in survey-based studies. Given the possibility of this being an issue, Harman's single-factor test on the variables was conducted to test if common method bias is a major issue (Lindsay et al., 2020).

Endogeneity was a concern given the potential of omitted variables, thus a correlation matrix was used to test for correlation between individual effects and independent variables, in the event of high correlation a Hausman specification test would have been conducted, however, given the low correlations and multiple levels, a random coefficients model was used (Steel et al., 2021).

To extract the maximum common variance from all the variables, factor analysis with varimax rotation was carried out to come up with the underlying latent construct for the dependent variable and all the explanatory variables measured on a scale of 1 to 7. Additionally, the analysis will employ measures such as counterbalanced survey items, refinement of scale times and, anonymity.

The methods and work done were employed in Chapter 5 under Results and findings.

4.11. Ethical considerations

Ethical considerations in research design and methodology are a set of principles that guide the research design and collection. (Rashid et al., 2019). There were several ethical considerations made when conducting the quantitative research study on the "Multilevel impact of individuals and culture on knowledge sharing in Africa". The researcher sought guidance from the EXCO institutional review boards and the ethics committees and was granted ethical clearance as can be seen from similar studies in the literature review. To ensure a smooth and well-timed process constant communication occurred between the researcher and Head of HR, Head of Compliance and Head of Legal.

The participant's right to privacy was respected – anonymity was guaranteed using Microsoft Form Data Encryption and other firmwide encryption used by the firm. Additionally, respondents were required to agree to informed consent for data collection and ensuring that data was not shared without the participants' permission.

Participants were informed about the purpose of the study and were given the choice and liberty to freely participate or disagree to take part without force or fear of repercussions. The study ensured that the findings accurately stood for the population being studied and were not just a biased sample by sampling and sending the survey to the entire population after clearance from the Heads of HR, Compliance and Legal. This has been discussed in the sampling section.

Participants' personal and sensitive information has been kept confidential and used only for the study. The data is currently being stored in a secured folder on the firm's OneDrive network, which ties in with measures agreed on encrypted data storage and secure data sharing in the agreement for ethical clearance.

4.12. Research limitations

The study aimed to understand the impact of individuals and cultures on knowledge sharing while deepening the contribution to international business theory. A few limitations to that aim are discussed below.

4.12.1. Scope of literature

There was a purposeful limitation in scope to Level 3 Academic Journal Guide 2021 studies and above. Christofi et al. (2019) advocated this approach and acknowledged that while the study may have omitted some emerging relevant studies and interesting grey literature, it was believed that a different journal selection would not change the course and nature of studies as the high quality of the journals used would yield more overall benefit. This measure also avoided availability bias and a snowballing search strategy was employed as literature was found (Steel et al., 2021).

4.12.2. Research depth

The employees of the firm who were the subjects of the study could not share material non-public information (MNPI) and security-restricted data. However, this did not limit the available dataset created by the study as no MNPI was requested. Future studies could focus on a qualitative approach to garner deeper insights into similar research.

4.12.3. Method

The study was cross-sectional and thus lacked temporal effects. Zellmer-Bruhn et al. (2016) proposed conducting longitudinal field experiments as a quasi-experimental method that would work well in IB research. Gooderham et al. (2022) also brought up the fact that a lack of non-longitudinal data raises concerns about reverse causality. On the results obtained, any further work in a future study could collect longitudinal data. This could involve targeting a smaller department of the organisation that operates over several national jurisdictions then sending a survey over a period of quarters and noting the change in response over time and the factors that influence them.

4.12.4. Measure

The survey was made to be concise with 44 questions and to take no longer than ten minutes. These constraints have the potential to limit the validity of results although tests were carried out to mitigate this risk. CMB was a major concern in this study due to the survey being the only source of data. False relationships between constructs were tested using Harman's single-factor test (Doty & Astakhova, 2020).

4.13. Conclusion

This chapter delved into the research methodology and design employed in the study, which aimed to explore the impact of individual attributes, organisational culture, and national culture on knowledge sharing within an emerging market multinational firm. Several key aspects of the research methodology have been discussed, providing a comprehensive overview of how the study was conducted. The choice of research philosophy was addressed, and the research

assumptions were outlined. The purpose of the research design was clarified as an explanatory study with a deductive approach.

The research strategy involved a cross-sectional survey conducted across multiple countries, with data collection techniques aimed at ensuring a highly structured approach with a large sample size and clear measurement. The importance of considering both quantitative and qualitative approaches was also highlighted in future research.

The population under study consisted of employees in the CIB division of the multinational firm, offering a unique opportunity to collect high-value quantitative data. The unit of analysis was at the individual level, allowing for a microfoundational examination of the factors influencing knowledge sharing.

The multilevel nature of the analysis was discussed, emphasizing the three levels of the individual, organisation, and country, which enabled us to explore the interplay of factors at different organisational levels. Sampling methods included total population sampling (TPS) due to the heterogeneity of the population.

The research instrument was adapted from existing questionnaires and surveys, ensuring content and construct validity. Data collection was conducted through an electronic survey. In terms of data analysis, statistical techniques were employed, including confirmatory factor analysis, hierarchical linear modelling, and various tests to assess data quality and potential biases. Despite all this, some limitations were acknowledged. These include the scope of literature, the cross-sectional nature of the study, the survey's brevity, and potential common-method bias.

In conclusion, this chapter provided a detailed account of the research methodology and design and set the stage for the subsequent chapters where results were presented and analysed.

Chapter 5: Results and findings

5.1. Introduction

Chapter 5 explains the results and findings from collecting quantitative data and statistically analysing it. The data was collected using a survey questionnaire as discussed in Chapter 4. Additionally, the quantitative methodology has been outlined in detail in Chapter 4 and is refreshed partly in some result details. As outlined in Figure 3, this chapter lays out all the pertinent results of the research study and begins with the information on the data collected from 478 respondents, followed by how it was prepared for analysis. Results with superfluous but important information are available in the annexures. Naturally, this includes data readiness and pre-test information.

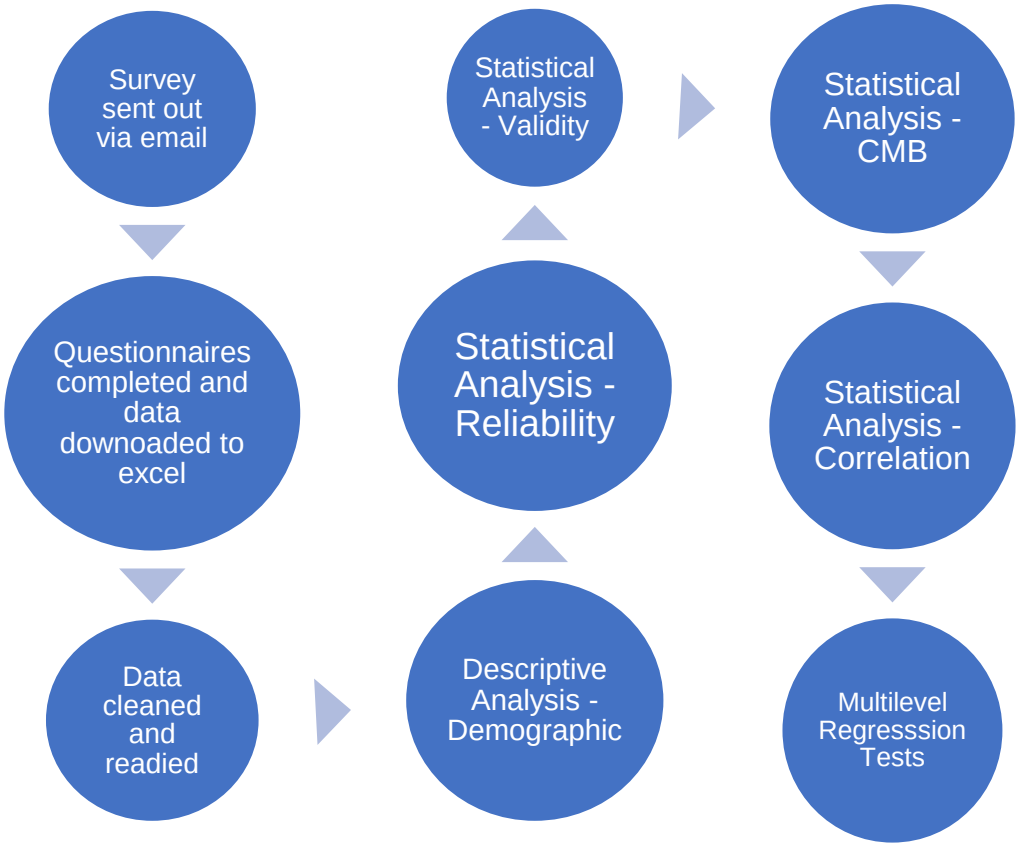

Figure 3: Data collection steps

The results of the reliability test analysis, confirmatory factor analysis and validity analysis were next and rounded up the broad analysis of constructs.

The multilevel nature of the hypotheses and the nested structure of the data within the organisation and nation called for the use of a random coefficients model (Odimegwu et al., 2023).

The following sections follow Figure 3 and provide the results of the research study organised along the phases of data collection (5.2), data analysis (5.3), statistical analysis (5.4) and multilevel modelling (5.5). The data collection, data analysis, statistical analysis and all additional confirmatory factor analysis are all interpreted and discussed within this chapter. The interpretation of the hypothesised relationships was part of the Multilevel Modelling (MLM) analysis and thus discussed in Chapter 6.

There are four models, namely (i) Model 1: The Null Model, (ii) Model 2: The Control Variables Model, (iii) Model 3: The one with all main effects of the hypothesized variables: individual competence (ability), intrinsic motivation, individual opportunity, collaborative organisational culture, and collaborative national culture on all three levels and (iv) Model 4: The full model with the two hypothesized interaction effects.

The different models were presented, and the results were discussed.

5.2. Data collection

The ethical clearance process took two months as the suggested survey questionnaire had to clear the firm's legal, compliance, communications and human resources clearance requirements. Additionally, the release of the survey had to be streamlined with other surveys already in the firm's communication calendar. Once cleared and approved the survey was emailed to all firm employees across CIB in all the 15 countries it operates. This included 2,757 employees in South Africa, 608 employees in the rest of Africa and 45 employees in offices based outside of Africa, making a total of 3,410 employees. The data collection was initiated on 1 September 2023 and terminated on 29 September 2023. On the first day, 70 participants completed the survey. Halfway through the survey period, 328 participants had completed as can be seen in Figure 4. The number gradually increased to 478 participants by the end of the survey period. The response rate was 42% for the population that received the email (1,118).

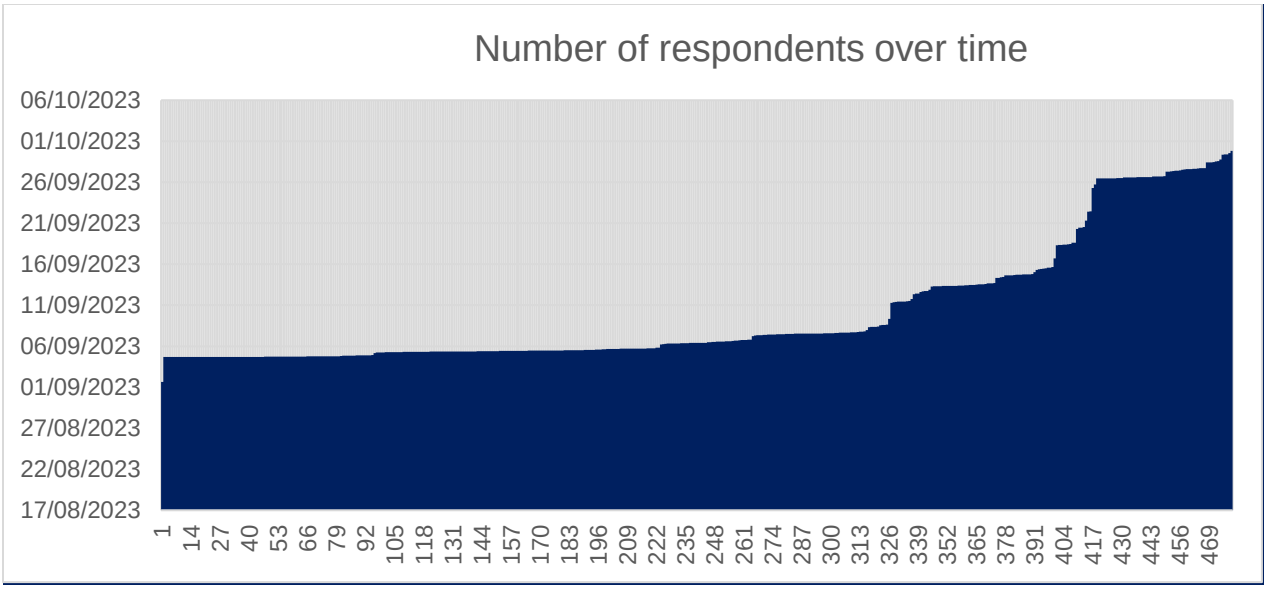

Figure 4: Number of respondents over time

The data was collected anonymously, downloaded and safely stored on the firm's encrypted storage drive. The information is to be kept for securely for a minimum of 10 years. All participant data was protected once collected and thus confidentiality was ensured. No participant's data could be traced as Microsoft Forms ensured anonymity and no identifiable personal information was collected. Demographic questions were sent out but only for aggregation and collection of cultural data.

5.3. Data analysis

The area of study is international business, and the test is being conducted on a multinational. Thus, the boundaries are international and include Headquarters (HQ), namely South Africa and subsidiaries (SUB) which include twelve African countries, two European countries and one North American country.

5.3.1. Data preparation and coding

Post sending out the invitation email with the survey link, 478 respondents filled the survey, with a response rate of 42% on Microsoft Forms. The survey was designed to allow respondents to not answer questions to uphold the voluntary nature of the study. This population number excludes the 10 from the sample survey. Feedback obtained was incorporated to improve the

study with the biggest input being not to make answering all questions mandatory. The data from the sample survey was deleted to show alignment with the firm's compliance on information controls on unused data and as pilot data cannot be used for analysis.

The data was scanned to see for extreme selections in the Likert scale and remove potential completions filled compulsively without thought. To avoid tedious hard coding, scales which had pre-determined fields were filled to provide clarity and sufficient choices for respondents. This approach avoided tedious data screening and editing post-data collection and limited user error and inputted variance.

The descriptive data was coded by section and number:

- Three questions from the Business Unit Identification section: BUI
- Six questions from the Knowledge Sharing section: KS
- Four questions from the Individual Competence (ability) section: IC
- Four questions from the Intrinsic Motivation section: IM
- Three questions from the Individual Opportunity section: IO
- Five questions from the Collaborative Organisational Culture section: COC
- One question from the Collaborative National Culture section: CNC
- Questions from gender, tenure (at the firm), tenure (career) and departmental size: GD, TNA, TNC and DS
- Fourteen questions from the Well-being section: WB

The final questionnaire used for the study is available in Appendix B.
A codebook was created and maintained (Appendix C) to cover various categories of variables and their respective scale values and descriptions. The variables were created in Microsoft Forms, and the data was downloaded into Microsoft Excel and then uploaded and modified in IBM SPSS.

As set out in the process flow chart in Figure 3 above, the data was cleaned, readied and is set out below with each measure presented. There were 21,076 expected answers and 211 unanswered questions, with 0.99% missing answers. Thus, the overall completion rate for the survey instrument was 99%.

Table 4: Summary of response rate by question

Question Code	Response Rate		Question Code	Response Rate		Question Code	Response Rate
Q1 BUI_1	99%		Q16 IM_3	99%		Q31 WB_1	100%
Q2 BUI_2	99%		Q17 IM_4	99%		Q32 WB_2	100%
Q3 BUI_3	99%		Q18 IO_1	99%		Q33 WB_3	100%
Q4 KS_1	98%		9Q19 IO_2	99%		Q34 WB_4	100%
Q5 KS_2	98%		Q20 IO_3	99%		Q35 WB_5	100%
Q6 KS_3	98%		Q21 DCC_1	100%		Q36 WB_6	100%
Q7KS_4	98%		Q22 DCC_2	100%		Q37 WB_7	100%
Q8 KS_5	98%		Q23 DCC_3	100%		Q38 WB_8	100%
Q9 KS_6	98%		Q24 DCC_4	100%		Q39 WB_9	100%
Q10 IC_7	98%		Q25 OCC_1	100%		Q40 WB_10	100%
Q11 IC_2	98%		Q26 NCC_1	100%		Q41 WB_11	100%
Q12 IC_3	98%		Q27 GD_1	100%		Q42 WB_12	100%
Q13 IC_4	98%		Q28 TNA_1	99%		Q43 WB_13	100%
Q14 IM_1	100%		Q29 TNC_1	99%		Q44 WB_14	100%
Q15 IM_2	100%		Q30 DS_1	99%			

Table 4 above summarises the response rate per question, full data on both frequency of responses and responses per Likert scale and items presented are available in Appendix E. Unanswered questions were allowed given it was not compulsory to complete each question and the missing data was not replaced with mean data as this would increase common method bias. As there were enough responses and minimal missing data the data was not manipulated and was interpreted in the way it was collected, entries with missing data were included.

There were no instances of constant values in the Likert questions and thus not suggestive of unengaged responses. Of the 478 valid responses, eight took longer than one hour to be completed while the remaining 471 were completed in an average time of 8 minutes and 53 seconds. The time results can be found in Appendix G. All 478 completed responses were kept following Steel et al. (2021)'s recommendations for authors to not use arbitrary cutoffs to identify and eliminate outliers.

5.3.2. Respondent's descriptive statistics – demographics

The demographic characteristics of the 478 respondents are summarised in Figure 5 below, with further detail per item in Appendix H. The sample had the highest proportion of the population was females at 51.3% followed by males at 42.9% and 5.8% preferring not to say. None identified as binary. Half of the respondents have worked for the company for more than 10 years while

92% of respondents have worked in the industry for more than 5 years. Very few people worked alone, only 3 in fact with everyone else working in a team of 2 or more people.

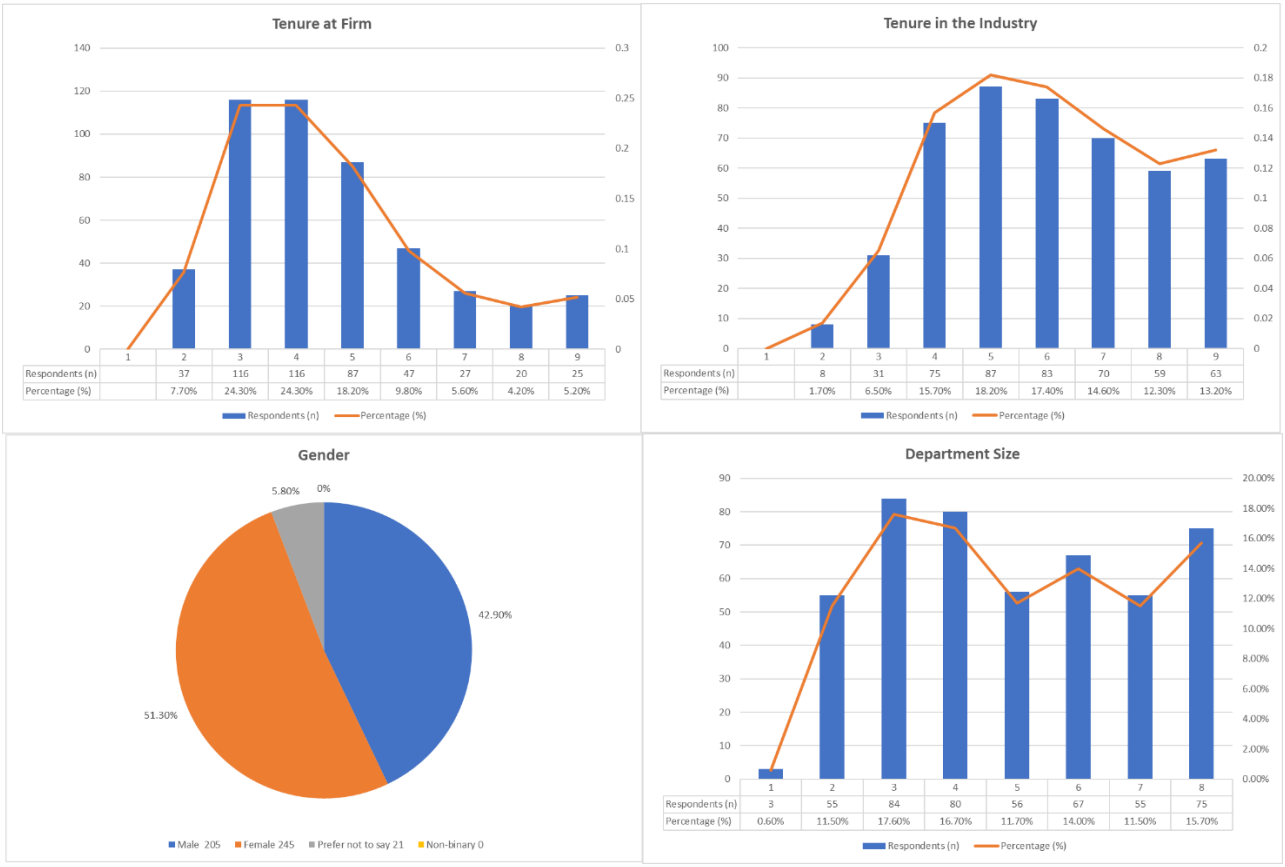

Figure 5: Respondents demographics

5.3.3. Respondent's descriptive statistics – Likert scale data

As discussed in Chapter 4 in the section called Ordinal Data Treatment, measures of central tendency were run on this Likert scale data in line with similar studies in the literature review. Descriptive statistics were run on four constructs (knowledge sharing, intrinsic motivation, collaborative organisational culture and well-being) and 28 Likert scale measurement indicators which ranged from (Tables 5 to 8 and Figures 6 to 10) 1 to 7 with 1 meaning either strongly disagree, never or most uncharacteristic and 7 meaning either strongly agree, always or 7 most characteristic.

As mentioned in Chapter 4 in the section called Standardization, these results were before standardization.

5.3.3.1. Knowledge sharing across business units

There were six items measuring knowledge sharing and they had median scores ranging from 3 to 5. This translated to the answers of “rarely”, “about half the time” and “often”.

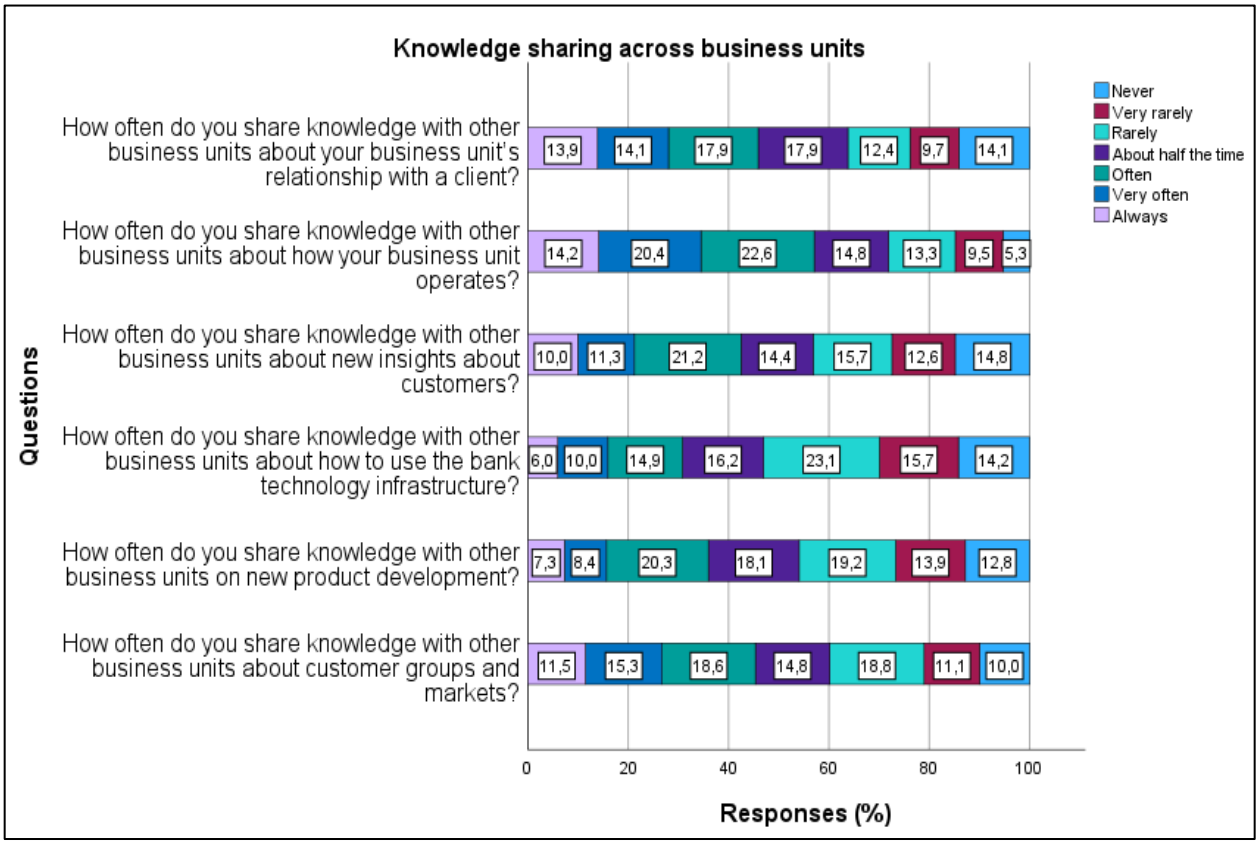

Figure 6: Distribution of responses to knowledge sharing across business units (Likert scale of 7)

As seen in Figure 6, respondents share knowledge about clients, services, technology and other business units about half the time.

There was little divergence between the central tendency scores of (*M* = 4.01) and (*Mdn* = 4), a good indicator of the absence of the influence of outliers and in line with the general central tendency seen in random variables. A high ratio of standard deviation to mean, often referred to

as the coefficient of variation typically exceeds 1 as this indicates the standard deviation is greater than the mean, suggesting a high level of variability relative to the average value (Saunders et al., 2019). All indicators within the knowledge sharing variable exhibited a low degree of variance.

Skewness is a statistical measure of distortion or asymmetry in a distribution, and it was present in all indicators. In terms of moderate skewness, negatively skewed data has a score of -1 to -0.5 and positively skewed is between 0.5 to 1. Highly skewed data is less than -1 or greater than 1. All the indicators had low levels of skew ranging from -0.39 to +0.26 which is reflected in Table 5. While most are left-skew – the degree of skewness is low.

Table 5: Knowledge sharing descriptive statistics

	N	*Mdn*	*M*	*SD*	*CV*	Skewness	Kurtosis
Q4 KS_1	452	4	4.13	1.83	0.44	-0.089	-1.04
Q5 KS_2	453	3	3.74	1.74	0.47	0.10	-0.87
Q6 KS_3	451	3	3.56	1.74	0.49	0.26	-0.85
Q7 KS_4	452	4	3.88	1.88	0.48	-0.02	-1.09
Q8 KS_5	452	5	4.58	1.73	0.38	-0.39	-0.80
Q9 KS_6	453	4	4.14	1.94	0.47	-0.17	-1.09
DV Score	448	4	4.01	1.47	0.37	-0.08	-0.69

Notes:

1: APA Format used for Descriptive statistics

While examining kurtosis, which is the peaked shape of a distribution. Kurtosis is depicted when the number is a positive value which means distribution is more peaked than normal and when the number is a negative value indicates a shape flatter than normal distribution. Kurtosis greater than 2 means distribution is too peaked. All the indicators had a flatter than normal distribution curve otherwise known as platykurtic distribution.

5.3.3.2. Intrinsic motivation of employees

In Table 6, all four items measuring intrinsic motivation had a score of (*Mdn* = 7), which translated to the answer of “strongly agree” and a score of (*M* = 6.33). Thus, respondents have high amounts of internally driven motivation to share knowledge.

Table 6: Intrinsic motivation descriptive statistics

	N	*Mdn*	*M*	*SD*	*CV*	Skewness	Kurtosis
Q14 IM_1	478	7	6.27	1.09	0.17	-2.18	6.34
Q15 IM_2	477	7	6.34	1.04	0.16	-2.37	7.48
Q16 IM_3	476	7	6.40	1.05	0.17	-2.53	7.88
Q17 IM_4	476	7	6.29	1.07	0.38	-2.17	6.02
IV Score	474	7	6.32	1.06	0.17	-2.36	7.71

Almost no divergence between the mean and median, as the bulk of responses were on 6 or 7, thus with minimum influence of outliers. All indicators within the intrinsic motivation variable had a coefficient of variation of less than one and thus had low variance.

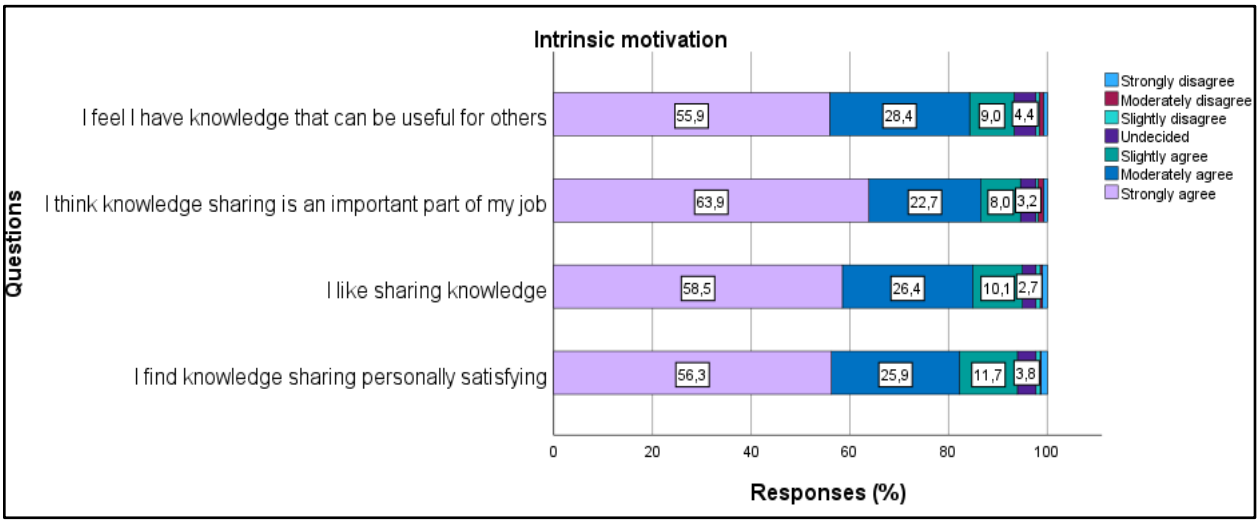

Figure 7: Distribution of responses to intrinsic motivation (Likert scale of 7)

Highly skewed data is less than 1, all the indicators had high levels of skew all sub 2 which was reflected in Figure 7 with a heavy left-skew. Kurtosis greater than 2 means distribution was too peaked, all the indicators had kurtosis scores higher than 6, indicating a leptokurtic distribution in which excess kurtosis is positive.

5.3.3.3. Collaborative organisational culture

Four items measured the collaborative culture of departments within the organisation, and they all had a score (*Mdn* = 6) seen in Figure 8, this translated to the answer of “moderately agree”

with a (*M* = 5.93, *SD* = 1.09). Thus, respondents seem to share a generally high sense of collaboration across all departments in general in the organisation.

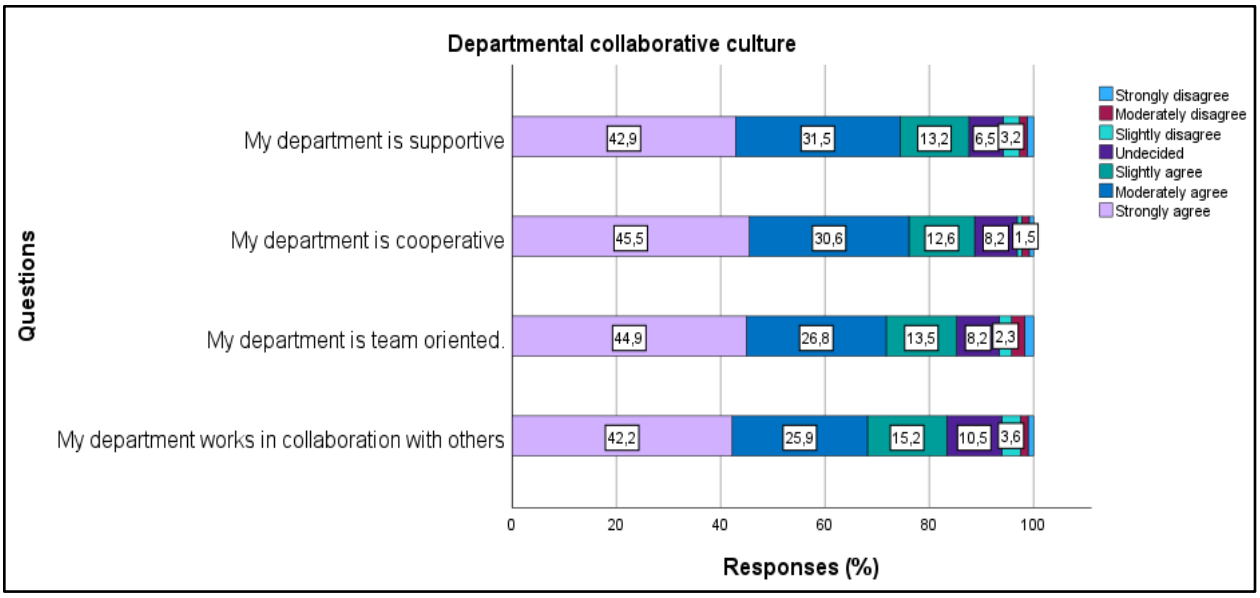

Figure 8: Distribution of responses to collaborative organisational culture (Likert scale of 7)

Like intrinsic motivation, there is little divergence between the mean and median, (*M* = 5.93) and (*Mdn* = 6), as the bulk of responses were on 6, thus with minimum influence of outliers (Table 7). All indicators within the collaborative organisational culture variable measured under 0.25 for *CV* and thus had low variance.

Table 7: Collaborative organisational culture descriptive statistics

	N	*Mdn*	*M*	*SD*	*CV*	Skewness	Kurtosis
Q21 DCC_1	474	6	5.84	1.34	0.23	-1.23	1.19
Q22 DCC_2	474	6	5.89	1.39	0.24	-1.52	2.08
Q23 DCC_3	477	6	6.04	1.20	0.20	-1.60	2.94
Q24 DCC_4	476	6	5.95	1.29	0.22	-1.58	2.57
IV Score	467	6	5.93	1.09	0.18	-1.44	2.49

All the indicators had skew between -1 and -2, indicating high levels of left skew which was reflected in Figure 8. Kurtosis was greater than 2 for three of the indicators, proving distribution was very peaked. Only one indicator had a kurtosis score between 1 and 2. The construct in general had a leptokurtic distribution in which excess kurtosis is positive.

5.3.3.4. Well-being

There were fourteen items measuring well-being and they had *Mdn* scores ranging from 4 to 6 (Figures 9 and 10). This translated to the answers of “undecided”, “slightly characteristic” and “moderately characteristic”, with (*Mdn* = 5) for the whole variable which meant the most common answer in this section was “slightly characteristic”.

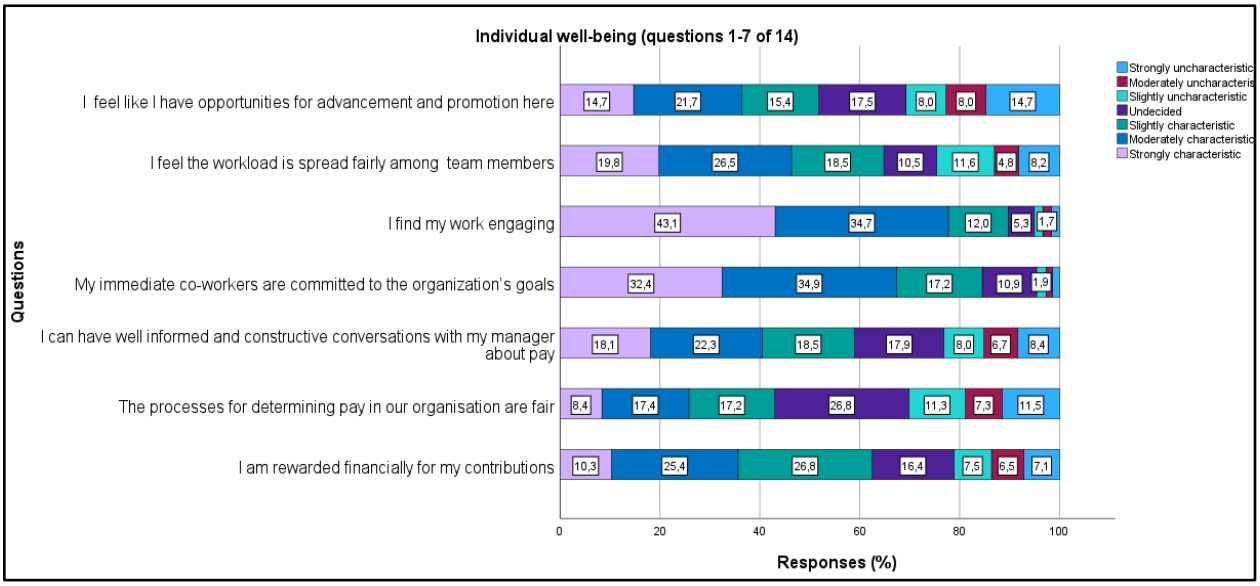

Figure 9: Distribution of responses to well-being (Q1-7 Likert scale of 7)

There was very little divergence between the mean and median, (*M* = 5.16) and (*Mdn* = 5), a good indicator of the absence of the influence of outliers. All indicators within the well-being variable exhibited a low degree of variance with *CV* scores with scores ranging from 0.21 to 0.46 Measurement invariance is a statistical aspect of measurement that specifies that the identical construct is being measured across some predefined groups. Houle et al. (2022) found that when developing scales or mixing scales, they found that the same construct was being tested in the sample group. The high degree of variance reflects that different constructs are being measured, confirmed by exploratory factor analysis which found two.

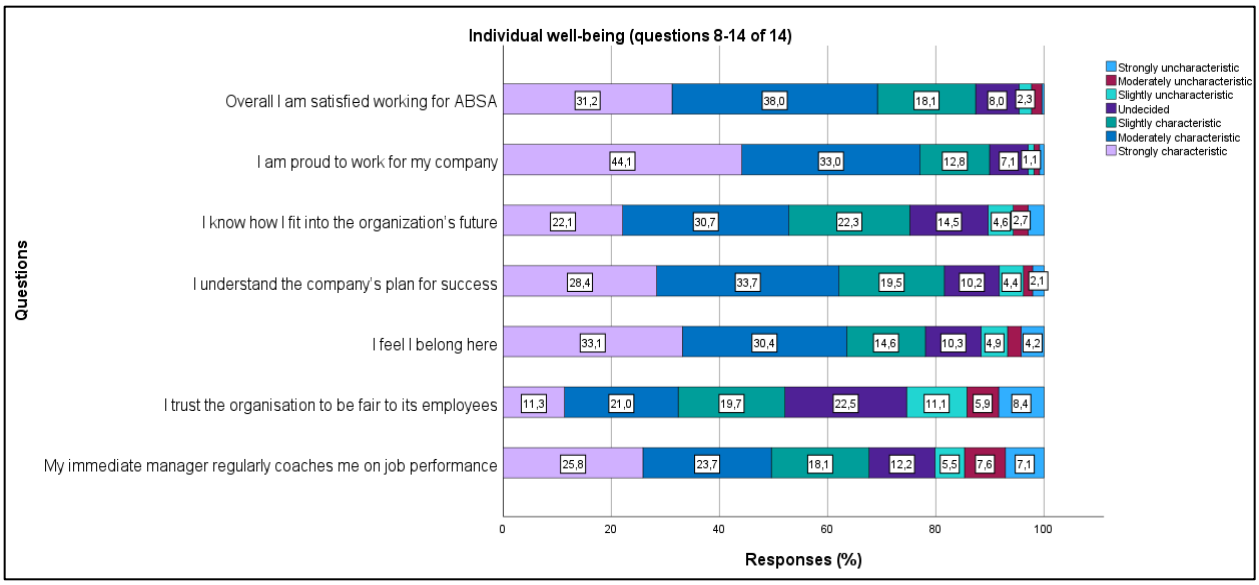

Figure 10: Distribution of responses to well-being (Q8-14 Likert scale of 7)

The skew ranged from -0.3 to – 1.2, thus there were moderate levels of skew reflected in Table 8 with a left skew. The kurtosis data had a large range with Q34 WB_4 and Q35 WB_5 greater than 2 showing a peaked distribution. Seven of the indicators had negative kurtosis scores and Q40 WB_10 and QB41 WB_11 had scores between -0.90 and -1.30.

Table 8: Well-being descriptive statistics

	N	*Mdn*	*M*	*SD*	*CV*	Skewness	Kurtosis
Q31 WB_1	477	5	4.66	1.66	0.36	-0.71	-0.25
Q32 WB_2	477	4	4.17	1.75	0.42	-0.28	-0.74
Q33 WB_3	475	5	4.71	1.82	0.39	-0.57	-0.64
Q34 WB_4	478	6	5.76	1.27	0.22	-1.31	2.04
Q35 WB_5	476	6	6.00	1.27	0.21	-1.86	3.93
Q36 WB_6	475	5	4.85	1.83	0.38	-0.69	-0.56
Q37 WB_7	475	5	4.35	1.99	0.46	-0.38	-1.07
Q38 WB_8	476	5	5.01	1.86	0.37	-0.78	-0.45
Q39 WB_9	476	5	4.48	1.72	0.38	-0.44	-0.58
Q40 WB_10	474	6	5.52	1.60	0.29	-1.24	0.94
Q41 WB_11	472	6	5.58	1.38	0.25	-1.21	1.38
Q42 WB_12	475	6	5.31	1.47	0.28	-0.99	0.74
Q43 WB_13	476	6	6.05	1.15	0.19	-1.63	3.33
Q44 WB_14	474	6	5.80	1.18	0.20	-1.25	1.78
Well-being	459	5	5.16	1.08	0.21	-0.67	0.17

Thus, skewness and kurtosis were detected for most if not all variables, but it was not particularly concerning.

5.3.4. Respondent's descriptive statistics – category data

5.3.4.1. Business units

Almost 25% of respondents worked in global markets one of the larger business units while respondents from "Business Enablement," "Compliance," "Legal," and "Risk" which are support functions, collectively accounted for around 16.4% of respondents (Table 9). This reflects the organisation's commitment to regulatory matters.

Table 9: Respondent's business unit within CIB

Business Units	*N*	Percentage (%)
Business Enablement	21	4.4%
Compliance	13	2.7%
Coverage	69	14.4%
Finance	34	7.1%
Global Markets	117	24.5%
IBD	41	8.6%
Legal	16	3.3%
Operations	40	8.4%
Risk	32	6.7%
Strategy	12	2.5%
Technology	24	5.0%
TB	52	10.9%
TOTAL	471	100%

The high number in "Global Markets" could indicate either a larger team or greater participation, while the lower numbers in big business units like "IBD" and Coverage" might suggest a need for greater engagement or representation in strategic planning.

The sample size for some units, such as "Strategy" and "Compliance," is quite small (twelve and thirteen respondents respectively). This may have affected the statistical reliability of any conclusions drawn specifically about these units.

5.3.4.2. Individual competence (ability) of employees

In Figure 11, 53.8% of respondents have not participated in management training, which implies that management training is not universal within the company, which could affect the development of leadership skills and competencies among employees while 60.5% have undergone specialized training in their area of expertise, suggesting that a significant portion of the workforce values and invests in continuous learning and skill development in their respective fields.

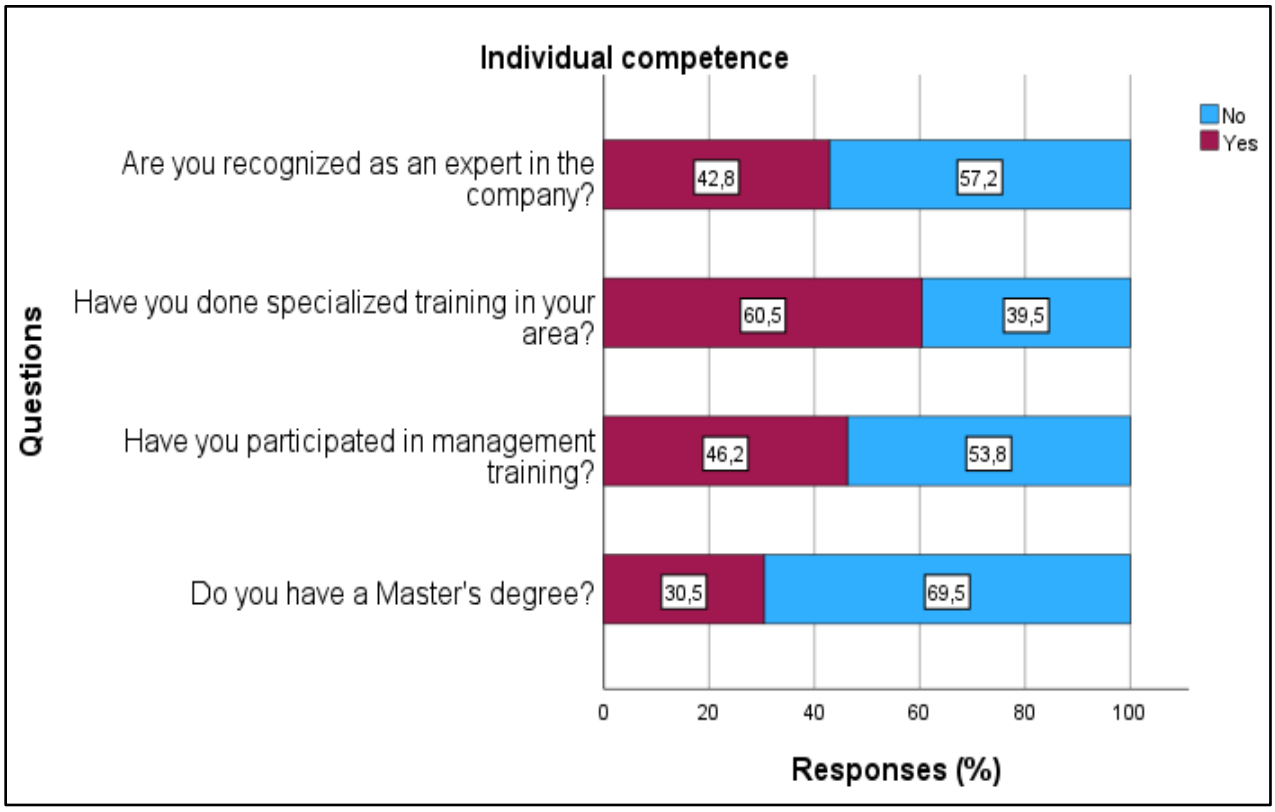

Figure 11: Distribution of responses to individual competence (Likert scale of 7)

57.2% of respondents have not been recognized as experts within the company, and while a substantial number of employees have expertise, not all of them have been formally acknowledged for their knowledge and contributions.

5.3.4.3. Individual opportunities for employees

54.9% of respondents have participated in cross-functional general training and seminars with other business units, while 33% have done job rotations across CIB (Figure 12%).

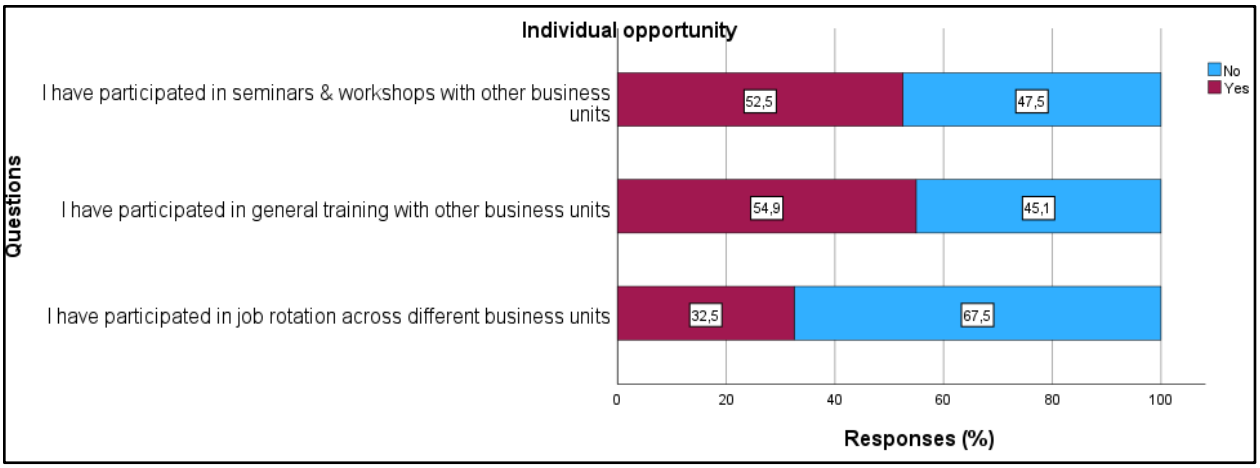

Figure 12: Distribution of responses to individual opportunity (Likert scale of 7)

5.3.4.4. Collaborative national culture

Table 10: Respondent's country office information

Designations	Country Code	*N*	Percentage (%)
HQ	South Africa	327	68.4%
SUB	Ghana	29	6.2%
SUB	Uganda	20	4.2%
SUB	Czech Republic	14	2.9%
SUB	Botswana	12	2.5%
SUB	Tanzania	12	2.5%
SUB	Zambia	12	2.5%
SUB	Mozambique	11	2.3%
SUB	USA	10	2.1%
SUB	Kenya	8	1.7%
SUB	United Kingdom	7	1.5%
SUB	Mauritius	7	1.5%
SUB	Seychelles	5	1%
SUB	Nigeria	1	0.2%
TOTAL		475	100%

As mentioned earlier there are 15 offices in 15 different countries with their own national cultures (Table 10). As expected, the largest number of respondents, 68%, were based in HQ in South Africa. The subsidiaries employed 32% of the rest of the respondents.

5.3.4.5. Individual collaborative national culture

As this is an international organisation, it is expected that some of the national offices would employ foreigners. 64% of the respondents were South African while Ghanaian, Ugandan, Motswana (Botswana), Tanzanian, Zambian, Kenyan, Mozambican, Czech, British, Mauritian and Zimbabwean. These nationalities represent smaller proportions of respondents, ranging from 1.3% to 5.9% each seen in Table 11.

Table 11: Respondent's nationality

Nationality	*N*	(%)		Nationality	(n)	(%)
South African	308	64.4%		Seychellois	5	1.0%
Ghanaian	28	5.9%		Slovakian	5	1.0%
Ugandan	20	4.2%		Indian	3	0.6%
Motswana	12	2.5%		Australian	1	0.2%
Tanzanian	12	2.5%		Canadian	1	0.2%
Zambian	12	2.5%		Chinese	1	0.2%
Kenyan	11	2.3%		German	1	0.2%
Mozambican	11	2.3%		Mosotho	1	0.2%
Czech	9	1.9%		Nigerian	1	0.2%
British	8	1.7%		Serbian	1	0.2%
Mauritian	7	1.5%		Swazi	1	0.2%
Zimbabwean	6	1.3%		Other	4	0.8%

* Motswana = Botswana, Swazi = Swaziland, Mosotho = Lesotho

This study, like Nuruzzaman et al. (2019)'s had a small size for some nationalities (one person a nation) and this was addressed using restricted maximum likelihood regression (RMLM). This was done to ensure a minimum effect on the statistical reliability of any conclusions drawn specifically about these nationalities. The "Other" category includes several nationalities not listed individually, making up 0.8% of the respondents.

5.4. Statistical analysis

5.4.1. Reliability and validity testing

Two options presented themselves for measuring the reliability of the measuring instrument on each construct in the questionnaire. Cronbach's Alpha and McDonald's Omega (Construct reliability) both measure data reliability, in other words, the stability and consistency of data produced by a questionnaire. Cheung et al. (2023) argued that MacDonald's measure is the better

measure for structural equation modelling based studies and is less biased while Cronbach's measure is the more popular measure computationally simpler in SPSS than Macdonald's measure which requires programmed add-ons. This study used both measures for completeness.

Constructs are either formative or reflective, whereas constructs are formative; the internal consistency becomes irrelevant (Stoermer et al., 2021). The constructs in this study were reflective, thus Cronbach's Alpha and MacDonald's Omega were used to test the internal consistency of the data. Both measures have a coefficient between 0 and 1, and coefficients greater than 0.7 indicate that the questionnaire can pass the internal consistency test, while those lower indicate that some questions must be removed from the instrument (Cheung et al., 2023).

The Average Variance Extracted (AVE) assesses the extent to which a construct accounts for the variance compared to the variance attributed to measurement error, values above 0.7 are considered strong, whereas a level of 0.5 is adequate. The results of the reliability tests, with a comprehensive breakdown of the test outcomes, are provided in Annexure F and are outlined in the subsequent sections.

5.4.1.1. Reliability and validity results: knowledge sharing

Knowledge sharing had an AVE = 0.66, below 0.7 is acceptable given it is above 0.5 (Table 12). One factor explains 66% of the construct. Cronbach's Alpha for the six questions relating to the knowledge sharing construct, was greater than 0.70, at 0.90 while Macdonald's Omega was 0.92.

This pointed to a high amount of internal consistency of the items measuring this construct and to the suitability of the items for measuring the construct. The item-total statistics reflected that removing any of the questions would not yield a higher Cronbach's α. Therefore, all questions in this construct were carried through to the research's hypothesis testing.

Table 12: Confirmatory factor analysis for knowledge sharing

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	3.97	66.22	66.22	3.97	66.22	66.22
2	0.62	10.36	76.58			
3	0.50	8.41	84.99			
4	0.37	6.08	91.07			
5	0.31	5.10	96.16			
6	0.23	3.84	100.00			

Cronbach's α	Macdonald's Ω	AVE
0.90	0.92	0.66

Extraction Method: Principal Component Analysis

5.4.1.2. Reliability and validity results: intrinsic motivation

Intrinsic motivation had an AVE = 0.78, well above the 0.7 level considered as good. One factor explains 78% of the construct. Macdonald's Omega for the four questions relating to the intrinsic motivation construct, was greater than 0.70, at 0.93 while Cronbach's Alpha was 0.90 (Table 13).

Table 13: Confirmatory factor analysis for intrinsic motivation

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	3.13	78.19	78.19	3.13	78.19	78.19
2	0.47	11.78	89.98			
3	0.29	7.30	97.27			
4	0.11	2.73	100.00			

Cronbach's α	Macdonald's Ω	AVE
0.90	0.93	0.78

Extraction Method: Principal Component Analysis

This pointed to a very high level of internal consistency of the items measuring this construct and to the suitability of the items measuring the construct. The item-total statistics reflected that removing any of the items would not yield a higher Cronbach's α. Therefore, all questions in this construct were carried through to the research's hypothesis testing.

5.4.1.3. Reliability and validity results: collaborative organisational culture

In Table 14, AVE = 0.70, which was considered good. Cronbach's Alpha for the four questions relating to the collaborative organisational culture construct, was greater than 0.70, at 0.85 while Macdonald's Omega was 0.90. This pointed to a high level of internal consistency of the questions measuring this construct.

Table 14: Confirmatory factor analysis for collaborative organisational culture

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	2.82	70.38	70.38	2.82	70.38	70.38
2	0.68	17.09	87.46			
3	0.30	7.60	95.06			
4	0.20	4.94	100.00			

Cronbach's α	Macdonald's Ω	AVE
0.85	0.90	0.70

Extraction Method: Principal Component Analysis

One factor explains 70% of the construct and reflects the suitability of the items for measuring the construct. The item-total statistics reflected that removing any of the questions would not yield a higher Alpha. Therefore, all questions in this construct were carried through to the research's hypothesis testing.

5.4.1.4. Reliability and validity results: individual competence and opportunity

Table 15: Confirmatory factor analysis for individual competence and opportunity

	Cronbach's α	Macdonald's Ω	AVE
Individual Competence	0.45	0.70	0.39
Individual Opportunity	0.56	0.77	0.54

Macdonald's Omega for the variables is greater than 0.70, at 0.45 while Cronbach's Alpha for competence is below 0.5 and for ability is above 0.56 seen in Table 15. In the same, competence average variance is low at 0.39 but within the threshold for opportunity. The item-total statistics reflected weak Alpha but adequate Omega. Lombardi et al. (2020)'s scores for two constructs

showed AVE and Cronbach's Alpha lower than the threshold but since their Macdonald's Omega scores were above the thresholds, they still considered the construct validity adequate for inclusion. Therefore, all questions in this construct were carried through to the research's hypothesis testing.

5.4.1.5. Reliability and validity results: well-being

The average variance came out at 0.57 above the acceptable level of 0.5 (Table 16). Two factors explain 57% of the construct. Macdonald's Omega for the fourteen questions relating to the well-being construct, was greater than 0.70, at 0.92 while Cronbach's Alpha was 0.91.

Table 16: Confirmatory factor analysis for well-being

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	6.70	47.82	47.82	6.70	47.82	47.82
2	1.31	9.35	57.17	1.31	9.35	57.17
3	0.98	6.97	64.14			
4	0.85	6.08	70.21			
5	0.68	4.83	75.04			
6	0.58	4.15	79.19			
7	0.57	4.07	83.26			
8	0.47	3.33	86.60			
9	0.40	2.84	89.44			
10	0.35	2.52	91.96			
11	0.32	2.31	94.27			
12	0.31	2.23	96.49			
13	0.29	2.07	98.56			
14	0.20	1.44	100.00			

Cronbach's α	Macdonald's Ω	AVE
0.91	0.92	0.57

Extraction Method: Principal Component Analysis

This pointed to a very high level of internal consistency of the questions measuring this construct and to the suitability of the items for measuring the construct. The item-total statistics reflected that removing any of the questions would not yield a higher Alpha. Therefore, all questions in this construct were carried through to the research's hypothesis testing.

5.4.2. Common method bias testing

When the same response method, such as the survey questionnaire in this study, is used to capture both the independent and dependent variables (IV & DV), common method bias may manifest (Gooderham et al., 2022). At this juncture, it is important to distinguish between common method variance (CMV) and CMB as the terms are often used interchangeably in quantitative studies. CMV is the systematic error variance that using the same method of measurement introduces and that distorts estimates of relationships. CMB means that the error variance in measurement is adequately large enough to lead to erroneous conclusions about the nature of the relationship (Bozionelos & Simmering, 2022).

However, even with this definition confusion, it is interesting that the literature is light on measuring this bias and its treatment with Yüksel (2017) asserting that of 10,000 articles from nine leading journals analysed, he found that only 0.0029% reported the issue of response bias and 0.0015% mentioned common method bias.

Howard and Henderson (2023) found that various researchers across the spectrum use a wide range of cutoffs, ranging from 0.30 to 0.70 as factor loading interpretations are presently subjective, this wide range may be due to uncertainties regarding the appropriateness of any specific cutoff. Table 17 discusses the results of Harman's Factor test for the dependent variable which shows a score of 0.60. Results for the dependent variable and independent variables are summarised in Table 18 and Table 19 but are available in Appendix J – Harman's single-factor test results.

Table 17: Harman's single-factor test for knowledge sharing

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	3.97	66.22	66.22	3.58	59.68	59.68
2	0.62	10.36	76.58			
3	0.50	8.41	84.99			
4	0.37	6.08	91.07			
5	0.31	5.10	96.16			
6	0.23	3.84	100.00			

Extraction Method: Principal Axis Factoring

The researcher followed the process in the decision tree in Figure 12, and it was determined before the study that there was a risk of common method bias. Accessing two large sample sizes

of individuals in two different African multinationals to test for IV on one and DV on the other would be impractical to implement in practice and securing one large sample required significant effort. Thus, the next step of knowing the source of CMB in the sample was followed and then procedural and statical controls were introduced.

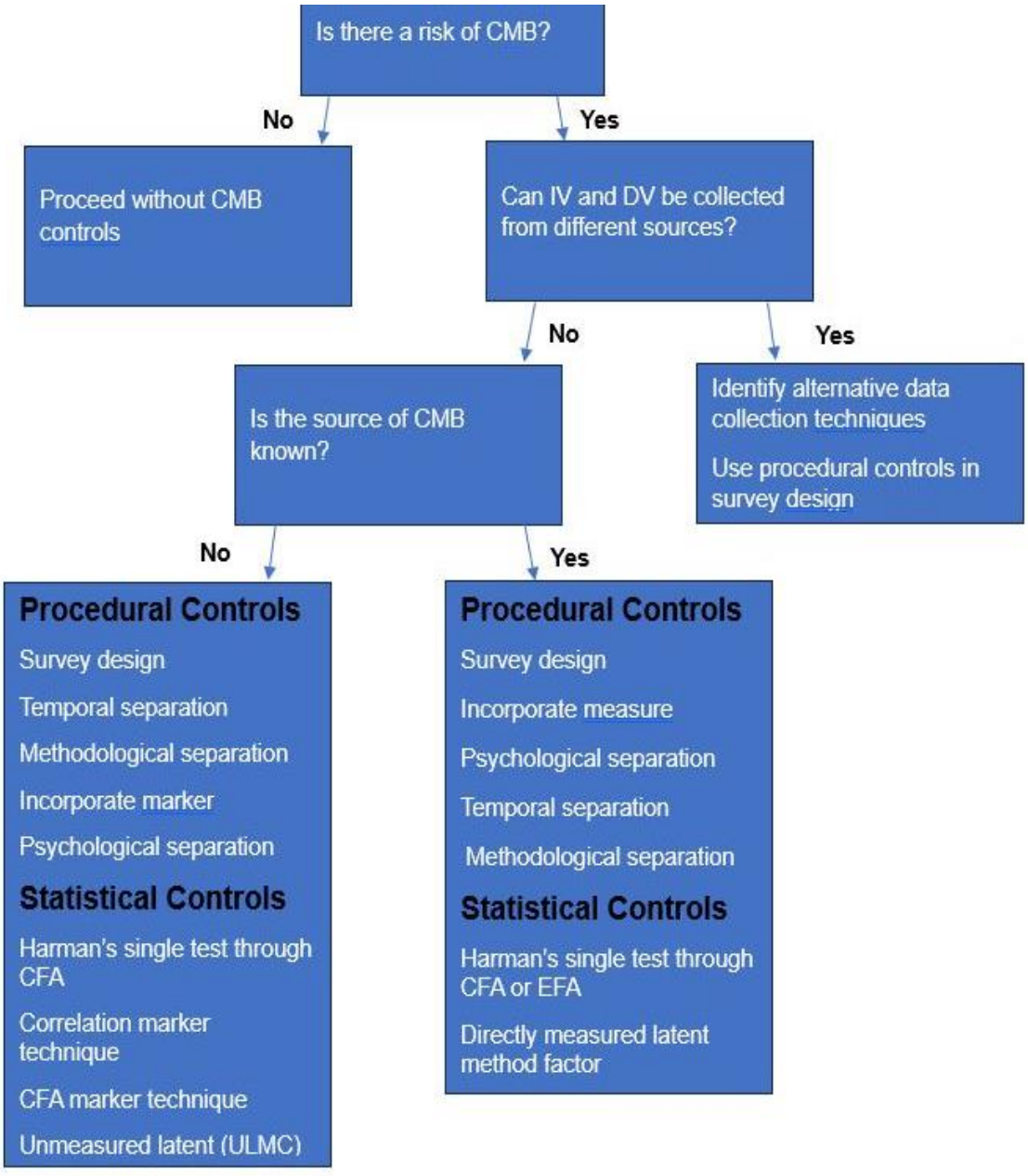

Figure 12: Recommendations for choosing appropriate controls for CMB
Source: Kock et al. (2021)

The two procedural controls were survey design and methodological separation. Firstly, the form delivered the questions in sections rather than along methodologies to limit respondents' use of common retrieval cues while answering different questions and the number of items was reduced to the absolute necessary to test constructs. Secondly, respondents were promised that their answers would be kept fully confidential, and they were given explicit instructions that there were no right or wrong answers. Additionally, respondents were informed that the survey was not intended to measure or detect good or bad practices.

Temporal separation was not used due to the timing constraints of the study. Kock et al. (2021) found that of the few studies that test for the potential threat of common method bias, the most dominant statistical control applied was Harman's single factor test.

5.4.2.1. Likert scale variables

Sample sizes do affect the test score, with 0.6 and above being acceptable for samples less than 100, and value of 0.5 above being acceptable for samples between 100 and 200 and a score closer to 1 describing the factors' ability to better explain a variable (Kock et al., 2021).

Harman's single-factor test, uses EFA and suggests that if the unrotated explanation (measured questions included) produces one factor that accounts for more than 50% of the variance, common method bias would be deemed present (Fuller et al., 2016). The sample size used was well above 400.

The values in Table 18 suggest that there is the presence of common method bias in some of the variables with scores above 50%. Knowledge sharing, intrinsic motivation and collaborative organisation culture scores showed the presence of common method bias however the study controlled for bias to a degree using an adjusted procedural design.

Table 18: Presence of common method bias

Variable	Construct	Harman's SFT
Dependent	Knowledge Sharing	0.60
Independent	Intrinsic Motivation	0.72
Independent	Well-being	0.44
Independent	Collaborative Organisation Culture	0.63

Fuller et al. (2016) stated that while CMB can be a limitation, it does not present a serious threat to the validity of research findings.

5.4.2.2. Non-category variables

Individual competence and opportunity both had scores below 0.5 and were both constructs measured from the same survey, thus indicating no evidence of the presence of CMB (Table 19). However, measures were taken to limit the bias effect including survey design and methodological separation.

Table 19: Presence of common method bias

Variable	Construct	Harman's SFT
Independent	Individual Competence	0.20
Independent	Individual Opportunity	0.37

5.4.3. Tests for individual item correlation

For all the constructs that were variables correlation was significant at the 0.01 level (2-tailed) against knowledge sharing. Correlations between knowledge sharing and the five other independent variables were relatively low (Table 20).

Table 20: Internal consistency measure for correlation

Construct	IC	IM	IO	DCC	Well-being
KS	0.26	0.29	0.30	0.37	0.26

5.5. Multilevel modelling

Considering the hierarchical structure of the hypotheses and their multilevel nature with 478 respondents from twelve departments, the most suitable model for testing all eight of the hypotheses was a mixed-effects model also referred to as a hierarchical linear model in which the coefficient of the moderator varied across business units and countries (Gooderham et al., 2022).

A random coefficients model was applied based on the variance decomposition at the three levels of individual, organisation and nation. All variables were standardized with a mean of zero and a

variability of one before executing the models, this was done because the models incorporated interaction effects involving variables with varying scales.

5.5.1. Model correlation

Correlation can be measured in two different ways depending on whether the data is continuous or non-parametric data measured. Pearson correlation is a measure of the linear relationship between two variables and is used for continuous data:

$$\boldsymbol{\rho}X,Y=Cov(X,Y)\sigma X\sigma Y$$

where:
ρX,Y = Pearson correlation coefficient;
Cov = Covariance; σX = the standard deviation of X;
σY = the standard deviation of Y;
$Cov(X,Y)$ = E [(X − μX)(Y − μY)].
While Spearman correlation is the non-parametric version of the Pearson linear correlation:

$$S=1-6\ \sum d2in(n2-1)$$

where:
S = Spearman correlation coefficient;
di = difference in paired orders;
n = number of cases.

As there were 10 continuous variables versus one categorical data variable, Pearson correlation was used (Rezaee et al., 2020; Saunders et al., 2019).

Table 21, shows the correlations, means, standard deviations and coefficients of variation of all the variables used post-confirmatory factor analysis before the variables are standardized. This was a two-tailed correlation analysis, and it was performed on an overall basis, specifically to assess the nature and significance of any positive or negative relationships between constructs.

Previous tests showed that post restrictions and factoring that most variables explain a decent part of the variation in themselves but are only slightly related to knowledge sharing as evidenced

by the relatively low but significant correlations. All values above 0.09 and below -0.09 were significant at the 5% level.

Only the cultural variables had high correlations with individual nationality and collaborative national culture having near perfect correlation, thus individual culture was dropped from later models. Organisational and national culture were closely correlated at 0.58 with all other correlations in the model being relatively low.

As mentioned in Chapter 4 in the section called Standardization, these results were before standardization.

Table 21: Correlation matrix (n = 478) with descriptive statistics for each variable before standardization

	1	2	3	4	5	6	7	8	9	10	11
Knowledge Sharing (1)	1.00										
Individual Competence (2)	0.26	1.00									
Individual Opportunity (3)	0.30	0.29	1.00								
Intrinsic Motivation (4)	0.29	0.30	0.15	1.00							
Individual Well-being (5)	0.25	0,11	0.18	0.23	1.00						
Individual Nationality (6)	-0.20	-0.14	-0.09	-0.02	-0.01	1.00					
Collaborative Organisational Culture (7)	0.35	0.15	0.22	0.34	0.58	-0.06	1.00				
Collaborative National Culture (8)	0.20	0.14	0.09	0.02	0.01	-1.00	0.06	1.00			
Gender (9)	-0.10	-0.12	-0.05	-0.08	-0.09	0.06	-0,13	-0.06	1.00		
Tenure at Firm (10)	0.06	0.06	0.15	0.01	-0.09	0.12	-0.04	-0.12	0.18	1.00	
Department size (11)	-0.12	-0.02	0.02	-0.03	-0.03	0.16	-0.03	-0.16	0.05	0.01	1.00
Mean (*M*)	4.00	1.80	1.39	6.32	5.16	54.61	5.93	45.40	0.57	3.58	4.95
Standard Deviation (*SD*)	1.81	1.19	1.07	4.25	1.57	19.20	1.30	19.20	0.50	1.82	2.01
Coefficient of Variation (*CV*)	0.45	0.66	0.77	0.67	0.30	0.35	0.22	0.42	0.88	0.51	0.41
Min	1	0	0	1	1	15	1	9	0	1	1
Max	7	4	3	7	7	91	7	85	1	8	8

All values above |0.09| are significant at the 5 per cent level.

5.5.2. Model fit

The results of the multilevel analysis are listed in Table 22 and Table 23, which together contain four models created posting fitting for results (after data standardization). The models are:

- Model 1: The Null Model which has no explanatory variables.
- Model 2: The Null Model with control variables introduced.
- Model 3: Model 2 with all the main effects of the seven constructs
- Model 4: Model 3 with the two hypothesised interaction effects incorporated to create a fully specified model as described in Figure 2 in Chapter 3.

In Model 1, the results of the null model without any explanatory variables are presented. The variance components for the intercept at both the organisational (β = 0.02, p = 0.29) and national levels (β = 0.20, p = 0.07) are not significant in this model at the 5% level, indicating no evidence of a range in mean knowledge sharing across the organisation and nations. However, the variance components for the intercept at the individual level (β = 0.87, $p < 0.001$) is significant, indicating a substantial range in mean knowledge sharing across individuals. Given this most of the variance in the Null model is explained at the individual level and no less than 20% of the total variance in individuals' knowledge sharing resided at the organisational level (2%) and the national level (18%).

Model 2 introduced the control variables: gender, tenure at the firm, departmental size and individual nationality. Tenure in the industry was dropped as it had a high correlation to tenure in the firm at -1.00 and added no significant explanatory power (Table 20). Tenure at the firm (β = 0.14, p = 0.01) and gender (β = -0.11, p = 0.03) were significant with an increase in females being negatively correlated to knowledge sharing. Individual nationality (p = 0.73) and department size (p = 0.35) are not significant in the model. The addition of these control variables reduced the unexplained variation at the individual level by 2%, while the unexplained variation at the organisational level decreased by 48%, indicating that the control variables explained 48% of the variation at the organisational level, while the national level reduced by 6%. Thus, control variables had a relatively powerful explanatory role at the organisational level which did not hold for Models 3 and 4. In model 2, most of the variance is still explained at the individual level (79%).

Table 22: Multilevel models for knowledge sharing (n = 478) with p values in parentheses

		Model 1 Null Model	**Model 2** Only Controls	**Model 3** Main Effects	**Model 4** Cross Interaction Effects
Intercept		0.27 (0.06)	0.25 (0.13)	0.09 (0.43)	0.69 (0.54)
Individual Level					
Individual Competence (IC)				0.09 (0.05)	0.09 (0.05)
Individual Opportunity (IO)				0.13 (0.01)	0.13 (0.01)
Intrinsic Motivation (IM)				0.12 (0.01)	0.17 (0.01)
Individual Well-being (WB)				0.03 (0.61)	0.03 (0.60)
Organisational Level					
Collaborative Organisational Culture (COC)				0.23 (<0.001)	0.24 (<0.001)
National Level					
Collaborative National Culture (CNC)				0.10 (0.18)	
Controls					
Gender			-0.11 (0.03)	-0.01 (0.84)	-0.01 (0.81)
Tenure at Firm			0.14 (0.01)	0.99 (0.03)	0.09 (0.06)
Departmental size			-0.05 (0.35)	-0.70 (0.13)	-0.07 (0.13)
Individual National Culture			-0.03 (0.73)		
Cross Interaction Effects					
Intrinsic motivation x collaborative organisational culture					0.05 (0.15)
Intrinsic motivation x collaborative national culture					-0.02 (0.61)

Source: Results of IBM SPSS

Table 23: Residual variance for multilevel models for knowledge sharing (n = 478) with p values in parentheses

		Model 1 Null Model	**Model 2** Only Controls	**Model 3** Main Effects	**Model 4** Cross Interaction Effects
Residual Variance					
Individual Level		0.87 (<0.001)	0.85 (<0.001)	0.72 (<0.001)	0.71 (<0.001)
Share of Variance Explained		0%	2%	18%	18%
Share of Total Variance		80%	79%	92%	92%
Organisational Level		0.02 (0.29)	0.01 (0.08)	0.02 (0.36)	0.02 (0.42)
Share of Variance Explained		0%	48%	13%	13%
Share of Total Variance		2%	1%	3%	3%
National Level		0.20 (0.07)	0.21 (0.52)	0.05 (0.41)	0.04 (0.34)
Share of Variance Explained		0%	-6%	77%	78%
Share of Total variance		19%	19%	6%	6%
Model Fit					
-2log restricted likelihood		1,231	1,155	1,011	1,018
AIC		1,237	1,161	1,016	1,023

Source: Results of IBM SPSS

In Model 3, all the main effects of the seven hypothesized variables (i.e., individual competence, intrinsic motivation, individual opportunity, individual well-being, individual collaborative national culture, collaborative organisational culture and collaborative national culture) were added on all three levels. Individual nationality did not give a result as it had a near-perfect correlation to a collaborative national culture. Gender (β = -0.01, *p* = 0.84) lost significance once the main effects were included only tenure at the firm remains valid among the control variables. At the individual level (first) level, individual well-being (β = 0.03, *p* = 0.61) was not insignificant, three of the other variables were significant with individual opportunity being the standout.

At the organisational (second) level, collaborative organisational culture was highly significant (β = 0.23, *p* < 0.001). At the national (third) level, collaborative national culture (β = 0.10, *p* = 0.18) was not significant. Consequently, when adding these seven variables, the variation on all three levels decreased substantially, suggesting that the explanatory power increased to 18% and 77% for the individual and national levels, respectively while at the organisational level, it reduced to 13%. In model 3, the amount of variance explained at the individual level increases to 92%

Model 4, which was the fully specified model, incorporated the two hypothesized interaction effects. In Model 3, the explanatory power was largely unchanged at 18%, 13% and 78% on the individual, organisational, and national levels, respectively. Again, individual nationality was due to a near-perfect correlation. However, while well-being remained the only insignificant first level variable (β = 0.03, *p* = 0.60), the explanatory power of intrinsic motivation became the most dominant. Results at the second and third levels remain unchanged. Notably, the results showed that the interaction between a collaborative organisational culture and intrinsic motivation (β = 0.05, *p* = 0.15) and collaborative national culture and intrinsic motivation (β = -0.02, *p* = 0.61) was not significant. Model 3 had adequate power to explain the nature of relationships as the amount of variance explained at the individual level does not change from 92% in Model 4.

5.6. Conclusion

In this chapter the findings for the many analyses conducted were presented following the guidance introduced in Chapter 4, that is Data Collection, Data Analysis, Statistical Analysis and Multilevel Modelling. Firstly, in the data collection, data was cleansed and screened resulting in in a sample size of 478 usable responses for analysis.

Secondly, data analysis was run on the data using descriptive analysis post prepping and coding. Characteristics were observed and measures of variance, skewness, kurtosis and central tendency were done.

Thirdly, statistical analysis was done as part of model validation with exploratory and confirmatory factor analysis which showed adequate model fit and, reliability although two measures tenure in industry and individual national culture were removed.

Lastly, post multilevel modelling, the results indicated that of the four individual-level variables (i.e., individual, competence, intrinsic motivation, individual opportunity and well-being) only well-bring did not have strong, positive effects on knowledge sharing across business units. Thus, the results supported three of the four hypotheses from research question one, namely H1a, H1b, and H1c and rejected H1d.

While a collaborative organisational culture had a significant direct effect on knowledge sharing, this was not the case for a collaborative national culture or an individually collaborative national culture and thus, H2a was supported but H3a was not. When a test for the interaction of these two variables with intrinsic motivation was conducted, no support for both H2b and H3b was found as the results were not significant.

The four models found that using three levels of analysis to explain the variance of the individual attributes namely ability, motivation and opportunity; and that their relationship with knowledge sharing can mostly be explained on the individual level (Level 1) and that organisational culture explains knowledge on the organisational level (Level 2). Although Model 3 had the lowest Akaike information criterion (AIC) score, Model 4 was selected as it included iteration effects and addressed all eight hypotheses.

Chapter 6: Discussion

6.1. Introduction

The view coming into this research was the idea that multinationals treat knowledge sharing as a fundamental part of their existence, a part of their existence that not only drives their performance but is necessary to survive. This focus on knowledge sharing was inspired by the work of Nicholas Foss and Paul Pedersen, who have done extensive highly rated work on knowledge sharing and advocated for more multilevel work with a focus on the individual. In an African context, multinationals internationalising into Africa and developed markets should be considering what influences this knowledge sharing and whether the African context requires a nuanced approach. AMO theory and Self-Determination theory were used to inform this research.

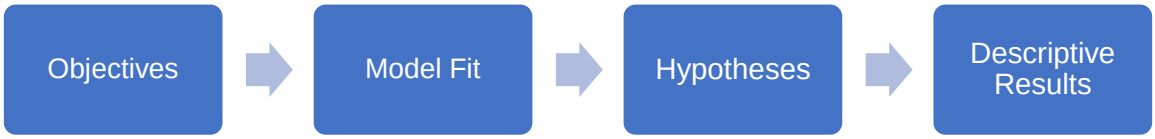

Figure 13: Chapter process flow

The hypotheses in this study were informed by a study by Gooderham et al. (2022), which was performed in a Nordic context. These contextual differences between developed and emerging markets and the lack of African focused research in the literature motivated for case study on an African multinational that is in the process of internationalising (Meyer et al., 2020).

Impact implies causality, however the author finds that the research found in the literature review has been based on relationships that indicate a level of impact and yet they have not participated in experiments, times series or SEM to prove causality (Gooderham et al., 2022; Lombardi et al., 2020; Najafi-Tavani et al., 2018).The author has used the word impact to address the broader question but the test on speak to a presence of relationship and not causality. This limitation is discussed further in Chapter 7 in Limitations.

This section outlined in Figure 13 discusses the objectives of the study, the model fit and explanatory power, the hypotheses and a discussion of the descriptive results. The objective of this chapter is to discuss the findings in the context of the literature review and the principal question, namely, the multilevel impact of individuals and culture on knowledge sharing in Africa.

In hypothesis one, the relationship between the individual attributes and knowledge sharing was tested. The four attributes tested were individual ability, intrinsic motivation, individual opportunity and individual well-being. These were tested for validity through an exploratory and confirmatory factor analysis. Common method bias was tested via Harman's Single Factor Test and bivariate relationships were investigated using Pearson's correlation analysis.

In hypothesis two, the relationship between collaborative organisational culture and knowledge sharing was tested, and the moderating effect of collaborative organisational culture on the relationship between intrinsic motivation and knowledge sharing. As in hypothesis one, exploratory and confirmatory factor analysis, Harman's single-factor test, Pearson's correlation and were all done.

In hypothesis three, the relationship between national collaborative culture and knowledge sharing was tested, and the moderating effect of national collaborative culture on the relationship between intrinsic motivation and knowledge sharing was also tested. As was executed in hypotheses one and two, exploratory and confirmatory factor analysis, Harman's single-factor test, Pearson's correlation and were all done.

All the variables were put through a multilevel linear regression using a hierarchal mode after the above tests.

A summary of Chapter 2 is discussed before proceeding to the Model fit section. In the literature review, the concept of knowledge sharing was defined and it was established that while knowledge sharing has been broadly studied, little study had been carried out on individuals, meaning the microfoundations of the field were missing, most studies only observed firms at one level and thus multilevel studies were necessary to fully understand the phenomena of knowledge sharing (Foss & Pedersen, 2019).

The literature review highlighted that multinationals are global and thus melting pots of a multitude of cultures. However, while culture, like knowledge sharing, is a broadly researched topic, cumulative work in the field is limited due to the unstandardised definition of culture in the field and like of multilevel work to delineate between cultures at different levels (Moore, 2021). Thus, the study built on work done in the Nordic region to study culture's relationship with knowledge

sharing at the organisational and the national level and extended it to the African region to also address a concurrent problem of a lack of multinational microfoundational work in emerging markets (Alofan et al., 2020; Kubicek et al., 2019).

Two theoretical lenses have been used to examine the results. The first theoretical lens used was the AMO (Ability, Motivation and Opportunity) theory. It is a well understood theory that explains how these three elements influence employee performance in a workplace setting, in particular how organisations seek to improve performance focus on enhancing employees' abilities through training and development, fostering motivation through effective leadership and reward systems, and create opportunities for employees to apply their skills (Gooderham et al., 2022). The second theory that was used is SDT and it was explored as a psychological framework for connecting intrinsic motivation and well-being back to enhancing employees' performance (Ryan & Deci, 2017).

6.2. Explanatory power

Reliability and validity tests were run on all the constructs using EFA and CFA in Statistical analysis in Chapter 5. Table 24 reflects a summary of the results. Almost no studies in the literature review used Macdonald's Omega, thus Cronbach's Alpha was used for discussion. Stoermer et al. (2021) used knowledge sharing as the dependent variable on four item scales and had an alpha of 0.79 versus 0.90 for the six-item scale used in this study with both being above 0.70.

Table 24: Summary of construct fit

Constructs	α	Ω	AVE	SFT
KS	0.90	0.92	0.66	0.597
IC	0.45	0.70	0.39	0.202
IM	0.90	0.93	0.78	0.715
IO	0.56	0.77	0.54	0.367
DCC	0.85	0.90	0.70	0.627
WB	0.91	0.92	0.57	0.439

The other independent variables (IC, IM and DCC) had Cronbach's Alpha scores of above 0.70 which matched Gooderham et al. (2022) results except for individual opportunity but it had a score of 0.77 for Macdonald's Omega above the threshold which justifies validity (Lombardi et al., 2020).

Adequate common method bias testing was found lacking in the literature review, but this study tested for it using Harman's single-factor score. It was found present in the variables and addressed (Kock et al., 2021). To obtain even more convincing information as to whether considering a CFA of the model was justifiable several close-fit indexes have been advocated (Hu & Bentler, 1999). As the constructs, individual competence and individual competence were "yes" and "no" responses, their goodness-of-fit statistics could not be calculated for the maximum likelihood extraction method. Thus, four of the other constructs (knowledge sharing, intrinsic motivation, collaborative organisational culture and well-being) were used for the goodness-of-fit tests. This was because they had zero degrees of freedom and thus rendered these constructs unsuitable for factor analysis. Thus, the summation of the items for these constructs was used in the modelling.

The absolute fit index assessed how well the model fits the data in absolute terms while the incremental fit indices compared the fit of the proposed model against a baseline model, often a null model with no relationships among variables (Hu & Bentler, 1999). The model missed adequacy for the absolute fit index but was acceptable for the incremental fit index based on the thresholds in Table 25. In the literature this occurs when models that add complexity (more parameters) improve the incremental fit by capturing more nuances in the data but fail to reach an absolute standard of good fit if the overall model structure is not a good representation of the data, additionally with a very large sample such as in this study with 478 respondents, even minor discrepancies between the model and the data can result in a poor absolute fit, whereas the incremental fit might still show improvement over a baseline model (Browne & Cudeck, 1992; Hu & Bentler, 1999; Sullivan et al., 2021).

Table 25: Summary of model fit

Measures	Threshold	KS	IM	DCC	WB
Fit					
$\chi 2_{Null}$		1528.98	1440.30	1001.01	3337.53
df_{Null}		15	6	6	91
$\chi 2_{Fit}$		90.99	66.42	7.65	399.46
df_{Fit}		9	2	2	64
Absolute Fit index					
$\chi 2_{Fit} / df_{Fit}$	< 2.50 good / < 4.00 acceptable	10.11	33.21	3.83	6.24
RMSEA	0.05 good / 0.06 – 0.08 acceptable	0.14	0.26	0.08	0.11
Incremental Fit index					
NFI	> 0.95 acceptable	0.94	0.95	0.99	0.88
TLI	> 0.95 acceptable	0.91	0.87	0.98	0.85
CFI	> 0.95 acceptable	0.95	0.96	0.99	0.90

Source: Adapted from a paper by Sullivan et al. (2021) and thresholds from (Browne & Cudeck, 1992) and (Hu & Bentler, 1999)

A good and usable fit was evidenced with the constructs as the incremental fit indices were within the thresholds provided by the literature and were similar to two knowledge sharing study model fit scores from Stoermer et al. (2021) (NFI = 0.97; TLI = 0.97; $\chi 2_{Fit} / df_{Fit} = 3.89$) and Gagné et al. (2019) (CFI = 0.90; TLI = 0.85; RMSEA = 0.09) both which had strong incremental fits but weak absolute fits but proceeded with multilevel modelling.

6.3. Model fit

Given the usable fit for the constructs, all eight of the hypotheses in this study were simultaneously analysed using a multilevel regression model. The software package, IBM SPSS was used, and the restricted maximum likelihood robust estimator was applied. This estimator is considered a robust estimator as it even works with small groups such as those represented here in small country offices and departments (Steel et al., 2021). Tables 22 and 23 reflect the results of the analysis. According to Stoermer et al. (2021), in multilevel analysis, there is a requirement that at least 5% of the variance explained in the dependent lower-level variable needs to be accounted for by a higher level, this was calculated for the null model of knowledge sharing using inter-cluster correlations (ICC). The null model dissected the variance in the respective variable in its within- and between-level parts and the results showed that this requirement was met, i.e. $ICC_1 = 0.8$

(80% of variance explained by country level variables). Thus, the integration of country-level variables was warranted.

In Chapter 2, Dastmalchian et al. (2020) argued that there are few observed and limited effects from multilevel studies, however changes in variance explained from the Null Model with control variables (Model 2) to the Model with main effects (Model 4) refute this and provide evidence for the call for further multiple studies by authors including Chen et al. (2023) and Meyer et al. (2020) to differentiate between the role of individuals versus measuring supra-individual measures like teams and departments. In this study most of the variation across the models was explained at the individual and national levels and very little at the organisational level with the nuance of the findings showing that single-level studies would have missed this fundamental difference.

6.4. Hypotheses

The section starts with a summary of the hypotheses in Table 26. In summary, the main results included (i) confirmation of a positive relationship between individual ability, intrinsic motivation and individual opportunity with knowledge sharing (ii) lack of support for theory on mediating effects of culture (national and organisational) on the relationship between intrinsic motivation and knowledge sharing, (iii) lack of support for the relationship between national culture and knowledge sharing (iv) strong support for the relationship between organisational culture and knowledge sharing and (v) context matters in research.

Although Model 3 had the lowest Akaike information criterion (AIC) score, Model 4 was selected as it included iteration effects and addressed all eight hypotheses. Following the methodology in Chapter 4 and results in Chapter 5, the discussion below is based on Model 4 and excerpts of those results are used per hypothesis for ease of reference. As discussed in Chapter 4 in the section called Ordinal data treatment, to interpret the data, which included ordinal data, statistical measures of central tendency were employed as observed in the literature. As stated earlier impact implies causality but this research and the research it has been based on have used relationships to indicate a level of impact and the same has been done here following the existing literature (Gooderham et al., 2022; Lombardi et al., 2020; Najafi-Tavani et al., 2018).

Table 26: Summary of results per hypotheses

RQ	Hypotheses		Summary of results
1	H1a	Individual employee's competence is positively associated with the frequency of knowledge sharing across business units.	• Higher employee ability increases the frequency of knowledge sharing
	H1b	Individual employee's intrinsic motivation is positively associated with the frequency of knowledge sharing across business units.	• Higher employee motivation increases the frequency of knowledge sharing
	H1c	Individual employee's opportunities to interact with colleagues in other business units are positively associated with the frequency of knowledge sharing across business units.	• Higher employee opportunity increases the frequency of knowledge sharing
	H1d	Individual employee's well-being levels are positively associated with the frequency of knowledge sharing across business units.	• The relationship was not significant
2	H2a	The collaborative organisation's culture is positively associated with the frequency of knowledge sharing across business units.	• Collaborative organisational culture is positively and strongly associated with the frequency of knowledge sharing
	H2b	The collaborative organisation's culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.	• The relationship was not significant
3	H3a	A collaborative national culture is positively associated with the frequency of knowledge sharing across business units.	• The relationship was not significant
	H3b	A collaborative national culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.	• The relationship was not significant

Notes:

1: "Do individuals have an impact on knowledge sharing within an organisation?"

2: "Does organisational culture have an impact on knowledge sharing?"

3: "Does national culture have an impact on knowledge sharing?"

6.4.1. Research Question One: Individual's impact on knowledge sharing

The hypotheses below tested data gathered at the employee, organisation and national levels, addressing the call for microfoundations and multilevel research in the literature reviewed highlighted (Nuruzzaman et al., 2019).

The median of the knowledge sharing construct was that individuals on aggregate share knowledge across products and clients with departments "about half the time". However, on a median basis seen in Table 27, individuals were more inclined to share knowledge about how the BU operated than about the firm's products and attributes. For the dependent variable of knowledge sharing, central tendency (*M* = 4.01, *SD* =1.47), here for illustrative purposes

Table 27: Knowledge sharing insights

How often do you share knowledge…	Frequency Median
with other BUs about customer groups and markets?	About half the time
with other BUs on new product development?	Rarely
with other BUs about how to use the firm technology infrastructure?	Rarely
with other BUs about new insights about customers?	About half the time
with other BUs about how your business unit operates?	Often
with other BUs about your business unit's relationship with a client?	About half the time

The first research question was **"Do individuals have an impact on knowledge sharing within an organisation?"**

Of the four hypotheses, three answered the questions using the AMO theory and validated that individual's attributes do have a relationship with knowledge sharing. The level of internal motivation an individual has with regards to their knowledge, how much exposure and opportunity the individuals must interact with other business units, their inherent ability and how it's perceived within the firm all have a positive effect on how much knowledge they share and how often across the firm.

This behaviour was seemingly unaffected by how engaged they were with the firm as a whole or their level of job satisfaction. The limitations of the construct of well-being are discussed further in Chapter 7 in Limitations.

Table 28: Results on individual ability

Hypothesis: 1a	Individual employee's competence is positively associated with the frequency of knowledge sharing across business units.
Relationship	IC → KS
Regression Coefficient (β)	0.09
Significance (p-value)	0.05 (significant)
Null hypothesis rejected?	Yes

Ability or individual competence as measured using qualifications and expert status among other items has a significant positive relationship with how often knowledge sharing occurs across different business units. In Table 28, in terms of H1a, the regression coefficient was positive, and the relationship was statistically significant (β = 0.09, p = 0.05). The regression coefficient has been standardised and thus only the direction is interpreted (see Standardization). Pak et al. (2019) found that most studies have established that ability has a positive effect on most HRM practices including knowledge sharing.

Studies have found positive statistically significant results between individuals and their ability and several knowledge-based constructs that are related to the sharing, absorbing, management and use of knowledge (Shahnawaz & Zaim, 2020). Thus, the result is both intuitively and conceptually expected from the literature surveyed. Yildiz et al. (2019) explained how absorptive capacity represents individual ability thus supporting the general premise of the relationship while Gooderham et al. (2022) found that the European sample had a similar positive relationship between individual ability and knowledge sharing and that the relationship between was even more significant on his Nordic sample (β = 0.13, p < 0.001), compared to the predominantly African sample set. Interpreting and applying AMO theory in different cultural contexts can be challenging, this limitation is discussed in Chapter 7 in Limitations.

Table 29: Intrinsic motivation insights

	Frequency Median
I find it personally satisfying.	Strongly Agree
I like sharing knowledge.	Strongly Agree
I think it is an important part of my job.	Strongly Agree
I feel I have knowledge that can be useful for others.	Strongly Agree

In Table 29, the median score across all the items was the highest score showing that across the sample an overwhelming majority enjoy, like and consider knowledge sharing fundamental to their job spec. The sample population feels an internally generated motivation to share knowledge.

Table 30: Results on intrinsic motivation

Hypothesis: 1b	Individual employee's intrinsic motivation is positively associated with the frequency of knowledge sharing across business units.
Relationship	IM → KS
Regression Coefficient (β)	0.17
Significance (p-value)	0.01 (significant)
Null hypothesis rejected?	Yes

Motivation, or rather intrinsic motivation was measured by how much an individual finds it personally satisfying to share knowledge, whether they believe it is core to their job and whether they believe their knowledge is useful to others. In Table 30, in terms of H1b, the regression coefficient was positive, and the relationship was statistically significant ($\beta = 0.17$, $p = 0.01$) with the result supported by both Yildiz et al. (2019)'s findings on the positive relationship between intrinsic motivation and knowledge ($\beta = 0.28$, $p < 0.001$) and Gagné et al. (2019)'s findings ($\beta = 0.69$, $p < 0.001$).

The result was in line with established literature on motivation being strongly related to measures of performance including knowledge sharing (Argote, 2023). As with ability, Lombardi et al. (2020) found that Italian workers knowledge sharing behaviours are positively driven by intrinsic motivation and going further to show that extrinsic motivation has limited effects on knowledge sharing behaviours and can in certain cases have negative effects on behaviours associated with knowledge sharing such as coordination within firms. Thus, a European and African sample both have a significant relationship between individual intrinsic motivation and the frequency of knowledge sharing. Gagné et al. (2019) tested whether the phenomena were held globally by conducting the same study in a developed and emerging setting. The study found that the relationship was significant in both an Australian and Chinese sample.

Table 31: Results on individual opportunity

Hypothesis: 1c	Individual employee's opportunities to interact with colleagues in other business units are positively associated with the frequency of knowledge sharing across business units.
Relationship	IO → KS
Regression Coefficient (β)	0.13
Significance (p-value)	0.01 (significant)
Null hypothesis rejected?	Yes

The individual opportunity was measured by an individual interaction with other business units in terms of how many seminars they had attended with them, whether they had done a job rotation in different business units and whether had participated in training of any kind with other business units. Table 31 shows that in terms of H1c, the regression coefficient was positive, and the relationship was statistically significant (β = 0.16, p = 0.01). The established literature on literature supported this result Gooderham et al. (2022) found that the European sample had a significant relationship between individual opportunity and the frequency of knowledge, similar to the African sample (β = 0.56, $p < 0.001$).

As seen in Table 33, the highest median scores were on matters of engagement, equality and belonging where individuals found these to be moderately characteristic of the firm. However, matters around opportunities, job performance and contributions were found to be only slightly characteristic while pay determination was found to be opaque.

Table 32: Results on well-being

Hypothesis: 1d	Individual employee's well-being levels are positively associated with the frequency of knowledge sharing across business units.
Relationship	WB → KS
Regression Coefficient (β)	0.03
Significance (p-value)	0.60 (insignificant)
Null hypothesis rejected?	Failed to reject

Table 33: Part 1: well-being insights

	Frequency Median
I am rewarded financially for my contributions.	Slightly Characteristic
The processes for determining pay in our organisation are fair.	Undecided
I can have well informed and constructive conversations with my manager about pay.	Slightly Characteristic
Are your immediate co-workers committed to the organisation's goals?	Moderately Characteristic
Do you find your work engaging?	Moderately Characteristic
Do you feel the workload is spread fairly among your team members?	Slightly Characteristic
Do you feel like you have opportunities for advancement and promotion here?	Slightly Characteristic
Does your immediate manager regularly coach you on job performance?	Slightly Characteristic
Do you trust this organisation to be fair to all employees?	Moderately Characteristic
Do you feel you belong here?	Moderately Characteristic
Do you understand the company's plan for success?	Moderately Characteristic
Do you know how you fit into the organisation's future?	Moderately Characteristic
I am proud to work for my company.	Moderately Characteristic
Overall, how satisfied are you working for the firm?	Moderately Characteristic

Individual well-being was measured on 14 items using a combination of job engagement and job satisfaction scales and the relationship was proved insignificant on the strength of the relationship. Table 32, in terms of H1d, the regression coefficient was positive, however, the relationship was statistically insignificant ($\beta = 0.03$, $p = 0.60$). Intuitively, the more engaged an individual is and the more satisfied they are with their work lead some to believe the more likely that individual is to share knowledge frequently, Stoermer et al. (2019)'s work in South Africa found job satisfaction to be an important predictor of individual outcomes and does not support the above result.

However, a meta-analysis by Allan et al. (2019) on meaningful work showed that well-being measures such as engagement and job satisfaction displayed strong correlations with one another and explained the variation in other individual constructs such as life satisfaction and

general health. They had poor fits with work related outcomes such as knowledge sharing in business units. While overall well-being is important for individuals, it is affected by too many unknown variables outside of the work environment for it to effect knowledge sharing outcomes. Additionally, Saridakis et al. (2020) found that job satisfaction studies have yielded mixed results and have mostly been studied quantitively as in this study. A change in methodology to understand the holistic context of satisfaction to include both work and out of work concepts is needed.

The effect of the broader effects of out of work concepts speaks to Silic et al. (2020)'s work which showed how engagement and job satisfaction can be influenced by factors like reciprocity. The frequency of knowledge sharing can have a yet unexplained reciprocal element.

6.4.2. Research Question Two: Organisational culture impact on knowledge sharing

Individuals across all items moderately agreed their departments had a collaborative nature (Table 34). There was equal consensus on the level of support and cooperation given by departments to individuals.

Table 34: Collaborative organisational culture insights

	Frequency Median
My department works in collaboration with others.	Moderately Agree
My department is team oriented.	Moderately Agree
My department is cooperative.	Moderately Agree
My department is supportive.	Moderately Agree

The second research question was **"Does organisational culture have an impact on knowledge sharing?"**

The question had two hypotheses, 2a and 2b, one answered the question and validated that organisational culture does have positive relationship with knowledge sharing.

Table 35: Results on collaborative organisational culture

Hypothesis: 2a	The collaborative organisation's culture is positively associated with the frequency of knowledge sharing across business units.
Relationship	COC → KS
Regression Coefficient (β)	0.24
Significance (p-value)	<0.001 (very significant)
Null hypothesis rejected?	Yes

A department or business unit's culture can be collaborative or individualistic. The measure for this was a score based on the individual's assessment of how collaborative their department was and whether it was team-oriented, cooperative with others and had a supportive characteristic. The results in Table 35 of the African sample had a strong positive relationship of knowledge sharing from a collaborative culture in their departments ($\beta = 0.24$, $p < 0.001$). The result is both intuitively and conceptually expected from the literature surveyed. Studies have found positive statistically significant results between collaborative culture and the frequency of knowledge sharing. Wijethilake et al. (2023)'s case study on a Sri Lanka firm found that organisational culture drove changes in individual behaviour in that firm. Kubicek et al. (2019) contend that organisational culture is positively related to general intelligence and particularly cultural intelligence ($\beta = 0.38$, $p < 0.05$), thus not surprising that the effect transcends cultural differences.

Table 36: Results on collaborative organisational culture moderation

Hypothesis: 2b	The collaborative organisation's culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.
Relationship	IM → COC → KS
Regression Coefficient (β)	0.05
Significance (p-value)	0.15 (insignificant)
Null hypothesis rejected?	Failed to reject

As discussed later national culture does not seem to be significant in this study and organisational culture is positively associated, this is in line with Alofan et al. (2020) who suggest that organisational culture is such a strong effecter in MNEs in Saudi Arabia that it offsets negative national culture effects.

In terms of H2b in Table 36, the regression coefficient was positive, and the relationship was statistically insignificant (β = 0.05, *p* = 0.15) This result agrees with Etse et al. (2021) who found that organisational culture in their Ghanaian based sample had no meditating effect on other variables. Those researchers argued that the organisational culture of an organisation no matter how strong would be affected by whether an organisation was in a developing country or region versus a developed region and those hard facts would have be better mediators of other performance relationships.

This would support the result given both samples are mainly in developing regions. Najafi-Tavani et al. (2018) tested the same relationship using psychological safety as a contextual proxy for organisational culture and had an initial positive association (β = 0.19, *p* = 0.05) in his first model but found the effect weakened in his overall model (β = -0.06 *p* = 0.10) and that it had no significance. Thus, the developing nature or emergent nature of a country outside of its national culture could reduce the mediating effect of its organisation culture no matter how dominant or collaborative that culture is.

6.4.3. Research Question Three: National culture impact on knowledge sharing

The third research question was **"Does national culture have an impact on knowledge sharing?"**

The question had the following two hypotheses, 3a and 3b, both of which were rejected, suggesting that national culture does not have a significant relationship with the rate of knowledge sharing across business units nor does it strengthen the relationship between intrinsic motivation and frequency of knowledge sharing.

Table 37: Results on collaborative national culture

Hypothesis: 3a	A national collaborative culture is positively associated with the frequency of knowledge sharing across business units.
Relationship	CNC → KS
Regression Coefficient (β)	0.10
Significance (p-value)	0.18 (insignificant)
Null hypothesis rejected?	Failed to reject

In terms of H3a in Table 37, the regression coefficient was positive, and the relationship was statistically insignificant (β = 0.10, *p* = 0.18). The national collaborative culture measure was made by taking the individualism scores from Hofstede (1983) and (Minkov & Kaasa, 2022), and reducing them from the number 100 which gives an estimate of the nation's collaborative score, the opposite of its level of individualism.

There is limited research on the effect of national collaborative culture on knowledge sharing behaviour but the result is not entirely unexpected when the broader literature on the effect of national culture on the broader IB literature of operations is taken into account. Boscari et al. (2018) tabulated the relationships between national culture and other organisational performance constructs between 2000 and 2020 published in leading journals and found that 19 had positive significance, 24 had negative significance and 15 had no significance. They found all three results for the same constructs. This divergence in studied phenomena could be a result of misspecification as discussed in section the called Organisational and national culture in Chapter 2.

Table 38: Results on collaborative national culture moderation

Hypothesis: 3b	A collaborative national culture reinforces the positive relation between the intrinsic motivation of individuals and their frequency of knowledge sharing across business units.
Relationship	IM → CNC → KS
Regression Coefficient (β)	-0.02
Significance (p-value)	0.61 (insignificant)
Null hypothesis rejected?	Failed to reject

In terms of H3b in Table 38, the regression coefficient was negative, and the relationship was statistically insignificant (β = -0.02, *p* = 0.61). In this case, a collaborative national culture had no meditating effect on the relationship between intrinsic motivation and the knowledge sharing behaviour of individuals in line which was not in line with Gooderham et al. (2022) who found weak support for the mediating effect (β = 0.03, *p* = 0.03). However, even they found that splitting out clusters into Asian, European and Nordic weakened the results of the effect as one country, the home country drove the significance. In their cases, the home country Norway drove the significance of the relationship higher given the high collaborative effect of the Nordic region (72% of the sample) while in this result the home country South Africa drove the significance of the

relationship lower given the high individualistic effect of the South African region (68% of sample). Limited work has been done but some green shoots in lower level journals by Nguyen et al. (2019) provide support for the differences in the Nordic and South African samples by revealing that the relationship between intrinsic motivation and knowledge sharing behaviour is more robust in national cultures with collaborative attributes.

It is important to take a step back and consider Boscari et al. (2018)'s literature review which found that although national cultures are well studied in international business, the strength and direction of the relationships on ideas such as knowledge sharing was not well studied and had contradicting results. This was compounded by the reality put forward by Moore (2021) that the literature did not have a hard definition of national culture and the perspective of the measures used. This limitation was addressed here by using Gooderham et al. (2022) to measure national collaborative culture to have some continuity in the research process and build on work already done.

Structural equation modelling of this research to determine causality is the next step of the research process after this study and is limitation that is discussed in Chapter 7 in Limitations.

6.5. Descriptive results

The descriptive statistics for the respondents sampled to understand knowledge sharing at the multinational under study were discussed and showed both deviation and alignment with the literature.

6.5.1. Demographics

Figure 5 in the section called Respondent's descriptive statistics revealed a gender breakdown of the participants where females were 51% and 49% were males. The result of a majority of women in the financial services survey was different from the literature. Lindsay et al. (2020), also conducted a knowledge survey on a financial services firm and their respondents were 82% male and Lombardi et al. (2020) were 71%, as higher male populations are typical of the industry. Both studies were tested for measure of response representativeness, on their sample's gender mix, and it was found to be representative. The study found that gender was negatively related to knowledge sharing in Model 2 ($\beta = -0.11$, $p = 0.03$). However, in the final model the relationship

was proved insignificant (β = 0.01, *p* = 0.81) in line with Lombardi et al. (2020) who found that gender (β = -0.01, *p* = 0.10), level of education and level of job grade did not affect knowledge sharing.

Approximately 30% of the participants held a master's degree with honours, this was controlled for because most studies on knowledge sharing believe that the level of education is significant to the likelihood that someone will engage in knowledge sharing activities (Shi & Weber, 2018), which was in disagreement with Lombardi et al. (2020)'s result (β = -0.01, *p* = 0.10).

Results revealed that about 50% of respondents had been at the firm for less than 10 years, while about 50% of respondents had been in the industry for more than 20 years. Early in factor analysis tenure in the industry was removed by factor analysis. The went on to find that tenure at the firm was positively related to knowledge sharing in Model 2 (β = 0.14, *p* = 0.01). However, in Model 4, the relationship was weakened and became insignificant (β = 0.09, *p* = 0.06). This disagrees with the findings of Shi and Weber (2018) who posited that tenure at the organisation could influence the specialisation of knowledge and awareness of expertise. Lombardi et al. (2020) found the opposite behaviour with age (*M* = 40, *SD* = 8.51), and discovered that tenured and older employees were less likely to share knowledge (β = -0.01, *p* = 0.01).

None of the demographic results indicated any potential bias discussed in the section in Chapter 4 called Data bias.

6.5.2. Likert data

As mentioned in Chapter 4 in the section called Ordinal data treatment, Stevens (1946) methodology remains a large point of contention when measuring human behaviour using multiple points for ratings. Many international business studies use Likert data and apply measures of central tendency to express views and interpret phenomena such as Gibson et al. (2019). To interpret the data, this study collected ordinal data using measures of central tendency following the researchers who are in support to provide more understanding. In Chapter 5 in the section called Respondent's descriptive statistics – Likert scale data measures of central tendency were run on this Likert scale data in line with similar studies in the literature review.

6.6. Conclusion

As shown in Chapter 2, the results of studies on individuals, their cultures and the relationship of the attributes with knowledge sharing are exhaustive in some areas and inconsistent in others. While scholars have studied the above broadly, the varied definitions of the concepts, the variances in individuals in different cultures and the lack of microfoundational perspectives mean that there is no clear consensus on all questions. While the results appear to prove the default view that individual attributes like ability and motivation have a positive effect, they do not support the view that national culture moderates (positively, negatively or at all) the knowledge sharing behaviour of individuals. The results show that cultures set at the organisation level by managers directly drives the knowledge sharing activities of individuals in that business unit.

Based on the results obtained and the extant literature, the following key results were present: (i) individuals share knowledge about themselves and clients more readily than they do about the firm and products (ii) ability, motivation and opportunity drive knowledge sharing among individuals regardless of the cultural or national setting (iii) collaborative knowledge sharing behaviour in individuals is driven organisational culture.

As outlined Chapter 1 in Research aims and objectives, the research objective has been met, that is, how individuals' ability, intrinsic motivation, opportunity and well-being influence knowledge sharing, and evaluating the moderating effect of culture on the relationship between intrinsic motivation and knowledge sharing, with culture being viewed on the two levels of organisational culture and national culture.

Chapter 7: Conclusion

7.1. Introduction

This final chapter concludes by bringing attention to the applicable results of the research study, context of research, theoretical implications, contributions, practical implications, the limitations of the research itself and suggestions for future research.

7.2. Context of research

The objective of undertaking the study was to apply a microfoundational lens to understand how individual attributes relationship with knowledge sharing in an African multinational and whether the context in the form of culture moderated those relationships. The researcher aimed to meet that objective by understanding four factors. The first was the effect of a different and emerging operating environment, namely Africa, on the relationships between ability, motivation and opportunity in knowledge sharing established in developed market literature (Gooderham et al., 2022). Second, if a relationship existed between individual well-being and individual knowledge sharing. Thus, because of these two factors, the first objective was created, **"Do individuals have an impact on knowledge sharing within an organisation?"**

Thirdly, the researcher aimed to see how organisational culture influenced the relationship between intrinsic motivation and individual knowledge sharing, bringing about the second objective, **"Does organisational culture have an impact on knowledge sharing?"**

Finally, the research sought to find if national culture influenced the relationship between intrinsic motivation and individual knowledge sharing, leading to the third objective, **"Does national culture have an impact on knowledge sharing?"**

Thus, context was introduced by culture at three different levels, individual, organisational and national which allowed for a strong focus on microfoundations and multilevel work missing in recent IB literature (Contractor et al., 2019; Foss & Pedersen, 2019; Meyer et al., 2020; Palmié et al., 2023).

The literature review in Chapter 2 suggested that innovation and performance in multinationals are driven by their knowledge sharing capabilities and that knowledge sharing occurs at the macro-level between HQ and SUBS at the organisational level and the micro-level between individuals and business units, and thus, practices are influenced, often not consistently by the contexts in the form of culture of these individuals, business units and countries. This introduced the underlying theories of the study, that is, the AMO Theory as the greater perspective applied and the SDT Theory applied additively, whose foundations were applied in the framework. environments with weak state transparency.

7.3. Implications for Theory

The implications for theory from the research conducted are contextualised using three research questions and the objectives that were introduced in Chapter 1 which are briefly elucidated in the Introduction.

Research Question One: **"Do individuals have an impact on knowledge sharing within an organisation?"**

The question was broken into four hypotheses, each testing whether individual ability, intrinsic motivation, individual opportunity and individual well-being had a relationship with the frequency of knowledge sharing within an organisation.

Specifically, it can be concluded that individual ability, intrinsic motivation and individual opportunity play a significant positive role in how often individuals share knowledge with other business units. Individual well-being was found to not play a role in knowledge sharing within an organisation. Following the quantitative modelling methodology outlined in Chapter 4, exploratory factor analysis confirmed that one latent construct was extracted, being individual ability, intrinsic motivation and individual opportunity in each case of the first three cases and that two latent constructs were found for well-being. All four were empirically measured, then verified and analysed using multilevel modelling (RMLM-MLM). This resulted in a structural multilevel model, which had an acceptable model fit with significant explanatory power.

Thus, it can be concluded, that based on the conceptualisation and operationalisation of the latent constructs and their resultant model fit and predictive power, an individual's latent competence

which is upgradeable, their intrinsic motivation and the opportunities afforded to them have a positive effect on knowledge sharing within an organisation. More theoretical work should be done around the development of consolidated theories for well-being. The work being done by Ryan and Deci (2017) around extending SDT and well-being role should be taken up by business scholars.

The next two objectives addressed the question of context and how it affects the relationships now that they have been found to hold.

Research Question Two: **"Does organisational culture have an impact on knowledge sharing?"**

It was found that organisational culture plays a significant positive role in how often individuals share knowledge with other business units. The influence of the relationship between intrinsic motivation and knowledge sharing was found to be strong and positive, but organisational culture was found to have no moderating effects on it.

Research Question Three: **"Does national culture have an impact on knowledge sharing?"**

National culture was found to not have any relationship with how often individuals share knowledge with other business units or to influence the relationship between intrinsic motivation and knowledge sharing. More theoretical around methodology and scale perfection should be done to consolidate all the sampling done globally around culture.

7.4. Contribution to literature

This study built on work aimed to address three gaps identified in the international business literature, namely a lack of microfoundations, a lack of multilevel studies, a scarcity of studies on African contexts and a lack of studies on well-being's relationship with organisational performance in general and on knowledge sharing in particular.

Firstly, while the research carried out effectively addressed and modestly reduced the gaps identified, the most important contribution to knowledge sharing in MNEs is the challenge to the findings of Gooderham et al. (2022) who introduced and validated the notion of contextualised

AMO. They found that the AMO framework of knowledge sharing in MNEs had multi-level contextual interaction effects where organisational and national culture moderated the relationship between motivation and knowledge sharing. Specifically in their study, the context of working for a Nordic organisation in a Nordic region influenced how much the motivation of individual employees increased or decreased their knowledge sharing behaviour. This research found that the same interaction effects did not hold in this sample. Thus, the context of working for an African organisation in an African region did not influence how much the motivation of individual employees increased or decreased their knowledge sharing behaviour. This result reinforces the need for multilevel work to specifically rather than prescriptively deal with data and contributes to Foss and Pedersen (2019) call for multilevel research.

Secondly, the multilevel approach found that three of the individual variables (individual ability, intrinsic motivation and individual opportunity) contributed to variations in knowledge sharing across business units which is supportive of previous AMO research (Gagné et al., 2019; Pak et al., 2019; Yildiz et al., 2019) and contributes to the three scarce bodies of work on AMO effects, microfoundations research and multilevel research and in Africa.

Finally, as we found collaborative organisational culture to be a strong explanatory factor for knowledge sharing, this study contributes to the global organisational culture literature (Etse et al., 2021; Moore, 2021; Wijethilake et al., 2023) and emerging organisational culture literature in Africa (Ogbonna, 2019).

7.5. Implications for practice

This study found five implications for practice which are i) individual attributes positively influence knowledge sharing, ii) organisational culture influences knowledge sharing, iii) reduce focus on national culture, iv) multi-level contextual interaction effects of organisational and national culture need to be investigated and v) individual attributes conducive to knowledge sharing must be found, research and cultivated.

Firstly, since individual attributes positively influence knowledge sharing, MNEs should focus on recruiting and nurturing employees who are inclined towards sharing knowledge. This includes fostering traits like honesty, collaboration, and communication.

Secondly, the alignment of organisational culture with knowledge sharing suggests that MNEs should deliberately cultivate a corporate culture that encourages and rewards knowledge sharing. This can be achieved through policies, recognition programs, and creating a supportive environment that values not only knowledge but its sharing. In the same way, financial institutions make more money from transactions than from holding deposits, knowledge should be treated in the same way. MNEs can develop and implement global knowledge management strategies that leverage the positive aspects of individual attributes and organisational culture. This includes creating centralized knowledge repositories, collaborative platforms, and cross-border teams that facilitate knowledge sharing. Investment in training and development programs that enhance individual skills related to knowledge sharing (like communication, teamwork and cross-cultural competencies) can be beneficial.

Thirdly, the finding that national culture does not have significance in knowledge sharing suggests that MNEs need not overly emphasize adapting knowledge sharing practices to different national cultures. Instead, they can focus on a more universal approach to knowledge management that transcends cultural boundaries. Leaders and managers in MNES should model and promote knowledge sharing behaviours. This involves leading by example, encouraging collaboration, and removing barriers to sharing information.

Fourthly, given multi-level contextual interaction effects for organisational and national culture moderated the relationship between motivation and knowledge sharing for a predominantly Nordic sample (Gooderham et al., 2022) but not for an African sample, it implies that while contextualising is a valuable exercise, it cannot be applied to all frameworks and phenomena without the necessary research and resultant interpretation.

Despite the general findings, it's important for MNEs to regularly evaluate the effectiveness of their knowledge sharing practices and be ready to adapt them if certain regions or groups within the organisation respond differently.

Finally, MNEs should focus on cultivating individual attributes conducive to knowledge sharing and fostering an organisational culture that supports it, while not overly focusing on adapting these practices to different national cultures.

7.6. Limitations

The first limitation was that the approach of this paper was through a single case study of African MNE. Wijethilake et al. (2023) pointed out that there are inherent generalisability limitations associated with case studies. However, as discussed in the methodology section, the aim is not to develop generalisations about individuals, knowledge sharing and culture in general, but to rather shine a light and a degree of value on the presence of contextual phenomena which is derived when individuals and factors playing out different levels can affect the outcome of interventions or decisions to a high degree.

A second limitation of the study, is its focus on the financial services industry sector, based on the EMNE selected. Various other industries might relate more with different nationalities and cultural identities and thus attract different contextual factors thus creating different organisational cultures. The ability levels might be lower or less concentrated in different sectors and the jobs might be more linear creating fewer opportunities.

Thirdly, national culture as a construct could have been limited in application by the dominance of the South African sample and due to the cultural homogeneity of the sample of countries (i.e., Southern Africa and East Africa) Additionally, national collaborative culture was operationalised by reversing (Hofstede, 1983)'s individualism scores for countries, which is not a direct measure of actual collaboration within national cultures.

A fourth limitation of culture is that the national culture score was based on Hofstede (1983)'s measure of individualism and collectivism. While the national culture was not found to moderate knowledge sharing in this study, future studies might want to run this measure and one of Schwartz (2006)'s five cultural measures of hierarchy, intellectual autonomy, embeddedness, egalitarianism and affective autonomy alongside to hone on all possible effects of national culture. Diallo (2021) found that Schwartz's measures captured more aspects of culture than those of Hofstede and there were fewer missing data sets such as the Middle East. Additionally, when studying constructs like culture in international settings, there's a risk of oversimplifying or misinterpreting cultural nuances. Surveys may not capture the full complexity and diversity of cultural phenomena.

A fifth limitation was the presence of language bias (Steel et al., 2021). This was not accounted for because of the restriction of using only English based journals. Future journals should look at other highly rated journals available in French and Mandarin databases and this limitation can be addressed using well understood language models which continue to develop every day in complexity and availability.

A sixth limitation was the presence of common method bias emanating from the fact that the study used one research instrument in the form of a survey. However, the literature stated that it did not characterize a grave threat to the validity of research findings (Fuller et al., 2016).

A seventh limitation was the use of one-time data and not longitudinal data using more than one firm to get deeper insights into microfoundations.

An eighth limitation was the measure of well-being within the firm, it would have been more apt to measure the effect of well-being on an individual's knowledge sharing outside of the organisation to clients or other stakeholders.

The ninth limitation is that of the meaning of the results and the relationships found. To infer causality and depth to the findings the researcher needed to conduct experiments, times series or SEM (Gooderham et al., 2022; Lombardi et al., 2020; Najafi-Tavani et al., 2018).

As a tenth limitation, surveys rely on respondents' self-reports, which can be biased. Respondents may give socially desirable answers especially when surveys are conducted in a work setting. Respondents may not have complete self-awareness, affecting data accuracy as they input their lived experiences. Additionally, most surveys are cross-sectional, providing a snapshot at one point in time. This limits the understanding of changes over time and causal relationships.

An eleventh limitation concerning applying AMO theory in different cultural contexts can be challenging. The theory may not fully account for how cultural differences impact ability, motivation and opportunity. Additionally, the use of statistical methods in analysing survey data may not adequately address non-linear relationships or interactions between variables, particularly in complex models like AMO theory.

7.7. Suggestions for future research

As discussed in the limitations sector on culture, this research has uncovered some areas that may be of specific interest to knowledge sharing, culture and microfoundational scholars. A gap exists in a definitive paper on national culture and the development of a global scale that captures both developed and emerging market cultural idiosyncrasies.

The concepts of organisational culture, national culture and well-being are broad and complex. As the study focused on the well-established field of knowledge sharing, the findings on a single firm at a single point in time may not be comprehensive. Future studies might use longitudinal case studies on several firms concurrently and review multiple theoretical perspectives to explore the field more deeply and find stronger microfoundational outcomes. Additionally, well-being is a measure influenced by indigenous and exogenous influences within and outside of the organisation. It might be more apt to measure the relationship of well-being with an individual's knowledge sharing outside of the organisation to clients or other stakeholders.

This study advocated for microfoundational studies as the first premise yet used cultural constructs described by Foss and Pedersen (2019) as firm-level and country-level, namely organisational and national culture. While this addressed the multilevel gap in the literature there is still a need to find a micro-level unit of measure for culture in the world of international business.

The SDT theory explains both intrinsic and extrinsic motivation, and in the context of Africa containing some of the poorest and least equal populations in the world and the lack of gender pay parity, more work needs to be done on extrinsic motivation. Following the recommendations of Steel et al. (2021), this study calls for a combined focus rather than a moratorium on intrinsic motivation and a combined focus on intrinsic and extrinsic motivation and their effect on knowledge sharing and performance to help resolve these issues in emerging markets, as multinationals outside of government are the biggest providers of formal employment (Paul & Feliciano-Cestero, 2021).

Future studies could involve experiments, time series and SEM to prove causality and have a deeper understanding of the relationships.

7.8. Conclusion

The overarching objective of this research was to study the relationship between the constructs of individual ability, intrinsic motivation, individual opportunity and knowledge sharing within an African MNE contextualised for African organisational and national cultures. The research question essentially asked if individuals had an impact on knowledge sharing within an organisation, whether that organisation's culture also had an impact on knowledge sharing and finally, if the culture of the country it was operating in had an impact on knowledge sharing.

This study has found that individuals matter and context matters. The results have shown that the different attributes of individuals such as ability, motivation and opportunity have important positive relationships with knowledge sharing and justified Grant and Phene (2022)'s call to conduct complex multilevel research on individual attributes. Finding that organisational culture has a positive relationship while national culture is not significant supports Foss and Pedersen (2019) 's assertion that not including context when investigating individuals and their attributes leads to under-specification and sacrifices critical understanding that is necessary to operate MNEs in a global environment.

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Appendices

Appendix A – Ethical consent

GIBS ETHICAL CLEARANCE APPLICATION FORM 2023/24

G. APPROVALS FOR/OF THIS APPLICATION

When the applicant is a student of GIBS, the applicant must please ensure that the supervisor and co-supervisor (where relevant) has signed the form before submission

STUDENT RESEARCHER/APPLICANT:

29. I affirm that all relevant information has been provided in this form and its attachments and that all statements made are correct.

Student Researcher's Name in capital letters:	RUFARO MAPANDA
Date:	27 Aug 2023
Supervisor Name in capital letters:	DANÉEL VAN ECK
Date:	27 Aug 2023
Co-supervisor Name in capital letters:	
Date:	27 Aug 2023

Note: GIBS shall do everything in its power to protect the personal information supplied herein, in accordance to its company privacy policies as well the Protection of Personal Information Act, 2013. Access to all of the above provided personal information is restricted, only employees who need the information to perform a specific job are granted access to this information.

Decision:

Approved

REC comments:

Date: 01 Sep 2023

Appendix B – Survey instrument - knowledge sharing questionnaire

Business unit identification section (BU)

1. What business unit within CIB do you work in?
    1.1. Business Enablement (COO)
    1.2. Compliance
    1.3. Coverage
    1.4. Finance
    1.5. Global Markets
    1.6. IBD
    1.7. Legal
    1.8. Marketing
    1.9. Operations
    1.10. People & Culture
    1.11. Risk
    1.12. Strategy
    1.13. Technology
    1.14. TB
    1.15. Other

2. If you are in Global Markets, which business unit are you in?
    2.1. COO
    2.2. Quants & Data
    2.3. Research
    2.4. Sales & Structuring
    2.5. TCU
    2.6. Trading
    2.7. Other

3. If you are in IBD, which business unit are you in?
    3.1. CPF
    3.2. IBD

Knowledge Sharing Across BU - a 7-point scale from "never" (1) to "very often" (7)

4. How often do you share knowledge with other business units about customer groups and markets?
5. How often do you share knowledge with other business units on new product development?
6. How often do you share knowledge with other business units about how to use the firm technology infrastructure?
7. How often do you share knowledge with other business units about new insights about customers?
8. How often do you share knowledge with other business units about how your business unit operates?
9. How often do you share knowledge with other business units about your business unit's relationship with a client?

Individual Competence – yes (1) or no (0). The score counts the number of confirmations to indicate company expert from 0 to 4.

10. Do you have a master's degree? (Individuals with at least a master's degree, those with one in progress counted)
11. Have you participated in management training? (Individuals who had participated in management training – in-house or external)
12. Have you done specialized training in your area of expertise? (Individuals who were in specialized training in their area of expertise)
13. Have you been recognized as an expert in the company? (Individuals who were recognized as experts in the company)

Intrinsic Motivation – on a Likert scale of 1 to 7 with (1) being "strongly disagree" and (7) being "strongly agree".

14. I find it personally satisfying to share knowledge.
15. I like sharing knowledge.
16. I think it is an important part of my job to share knowledge.
17. I feel I have knowledge that can be useful for others.

Individual Opportunity - yes (1) or no (0). Count the number of interaction activities in which the individual had engaged with other business units from 0 to 3.

18. Have you participated in job rotation across different business units?
19. Have participated in general training with other business units?
20. Have you participated in seminars and workshops involving other business units?

Collaborative Organisational Culture - on a Likert scale of 1 to 7 scale ranging from "most uncharacteristic" (1) to "most characteristic" (7)

21. My department works in collaboration with others.
22. My department is team oriented.
23. My department is cooperative.
24. My department is supportive.

Collaborative National Culture - Reverse-coded Hofstede scale from 1 to 100 – where high number equals high amount of collaboration.

25. What country office are based in? (HQ of one 14 subsidiaries)

Individual Collaborative National Culture - Reverse-coded Hofstede scale from 1 to 100 – where high number equals high amount of collaboration.

26. What is your nationality? (All options available in drop down)

Control Variables

27. What is your gender?
    - 27.1. Male
    - 27.2. Female
    - 27.3. Non-binary
    - 27.4. Prefer not to say

28. Tenure - How many years have you worked at the firm?
    - 28.1. Less than 1 year
    - 28.2. 1 - 5 years

28.3. 6 - 10 years
28.4. 11 - 15 years
28.5. 16 - 20 years
28.6. 21 – 25 years
28.7. 26 – 30 years
28.8. More than 30 years

29. Tenure - How many years have you worked in your career?
    29.1. Less than 1 year
    29.2. 1 - 5 years
    29.3. 6 - 10 years
    29.4. 11 - 15 years
    29.5. 16 - 20 years
    29.6. 21 – 25 years
    29.7. 26 – 30 years
    29.8. More than 30 years

30. Departmental size – how big is your department?
    30.1. 0 – 1 people
    30.2. 2 - 5 people
    30.3. 6 - 10 people
    30.4. 11 - 15 people
    30.5. 16 - 20 people
    30.6. 21 – 50 people
    30.7. 51 – 100 people
    30.8. More than 100 people

Well-being- on a Likert scale of 1 to 7 scale ranging from "most uncharacteristic" (1) to "most characteristic" (7)

31. I am rewarded financially for my contributions.
32. The processes for determining pay in our organisation are fair.
33. I can have well informed and constructive conversations with my manager about pay.
34. Are your immediate co-workers committed to the organisation's goals?

35. Do you find your work engaging?
36. Do you feel the workload is spread fairly among your team members?
37. Do you feel like you have opportunities for advancement and promotion here?
38. Does your immediate manager regularly coach you on job performance?
39. Do you trust this organisation to be fair to all employees?
40. Do you feel you belong here?
41. Do you understand the company's plan for success?
42. Do you know how you fit into the organisation's future?
43. I am proud to work for my company.
44. Overall, how satisfied are you working for the firm?

Appendix C – Codebook

Table 39: Study codebook

	Variable Name	Value	Value Label
	BusinessUnit		
		1	Business Enablement (COO)
		2	Compliance"
		3	Coverage
		4	Finance"
		5	Global Markets"
		6	Investment Banking"
		7	Legal"
		8	Operations
		9	Risk
		10	Strategy
		11	Technology
		12	Transactional Banking
	Sex		
		1	Male
		2	Female
	TenureYearsAtAbsa		
		1	Less than 1 year
		2	1 - 5 years
		3	6 - 10 years
		4	11 - 15 years
		5	16 - 20 years
		6	21 – 25 years
		7	26 – 30 years
		8	More than 30 years
	TenureYearsWorkedLife		
		1	Less than 1 year
		2	1 - 5 years
		3	6 - 10 years
		4	11 - 15 years
		5	16 - 20 years
		6	21 – 25 years
		7	26 – 30 years

		8	More than 30 years
Size of department	***DepartmentalSize***		
		1	0 - 1 people
		2	2 - 5 people
		3	6-10 people
		4	11 - 15 people
		5	16 - 20 people
		6	21 – 50 people
		7	51-100 people
		8	More than 100 people
Country base of respondent's office	***CountryOfficeBasedIn***		
		1	South Africa
		2	Ghana
		3	Uganda
		4	Czech Republic
		5	Botswana
		6	Tanzania
		7	Zambia
		8	Mozambique
		9	United States of America
		10	Kenya
		11	United Kingdom
		12	Mauritius
		13	Seychelles
		14	Nigeria
Nationality of respondent	***Nationality***		
		1	South African
		2	Ghanaian
		3	Ugandan
		4	Motswana (Botswana)
		5	Tanzanian
		6	Zambian
		7	Kenyan
		8	Mozambican
		9	Czech
		10	British
		11	Mauritian
		12	Zimbabwean

		13	American
		14	Seychellios
		15	Slovakian
		16	Indian
		17	Austrian
		18	Canadian
		19	Chinese
		20	German
		21	Mosotho (Lesotho)
		22	Nigerian
		23	Serbian
		24	Swazi (Swaziland)
		25	Other
Knowledge sharing across business units (likert)			
SKCustomerGroupsmarkets		1	Never
SKNewProductDevelopment		2	Very rarely
SKTechInfrusutructure		3	Rarely
SKNewInsightsCustomers		4	About half
SKBusinessUnitOperates		5	Often
SKBusinessUnitClient		6	Very often
		7	Always
Individual competence (binary)			
MastersDegree		0	No
ManagementTraining		1	Yes
SpecializedTraining			
RecognizedAsExpert			
Intrinsic motivation on knowledge sharing (likert)			
SatisfyingSharingKnowledge		1	Strongly disagree
LikeSharingKnowledge		2	Moderately disagree
ImportantPartOfJobSK		3	Slightly agree
FeelHaveUsefulKnowledge		4	Undecided
		5	Slightly agree
		6	Moderately agree
		7	Strongly agree
Individual opportunity (binary)			
ParticipatedJobRotationOther		0	No

Participatedingeneraltraining		1	Yes
ParticipatedSeminarsOtherBU			
Organisational collaboration (likert)			
MyDepartmentCollaboratesOther		1	Most uncharacteristic
MyTeamOriented		2	Moderately uncharacteristic
Mydepartmentiscooperative		3	Slightly uncharacteristic
MyDeptsupportive		4	Undecided
		5	Slightly characteristic
		6	Moderately characteristic
		7	Most characteristic
Respondent well-being (likert)			
RewardedFinanciallyContributio		1	Strongly disagree
FairPayProcess		2	Moderately disagree
HaveConversationsManagerPay		3	Slightly agree
CoworkersCommittedABSAGoals		4	Undecided
FindWorkEngaging		5	Slightly agree
WorkloadSpreadAmongTeam		6	Moderately agree
OpportunitiesforPromotion		7	Strongly agree
RegularlyPerformanceReview			
ABSAFairToAllEmployees			
FeelSenseOfBelonging			
UnderstandABSAFutureSuccess			
KnowYourFitInABSAsFuture			
ProudtoworkforABSA			
OverallSatisficationABSA			

Appendix D – Timeline

The proposed timeline for the various phases of the planned research process will go as follows:

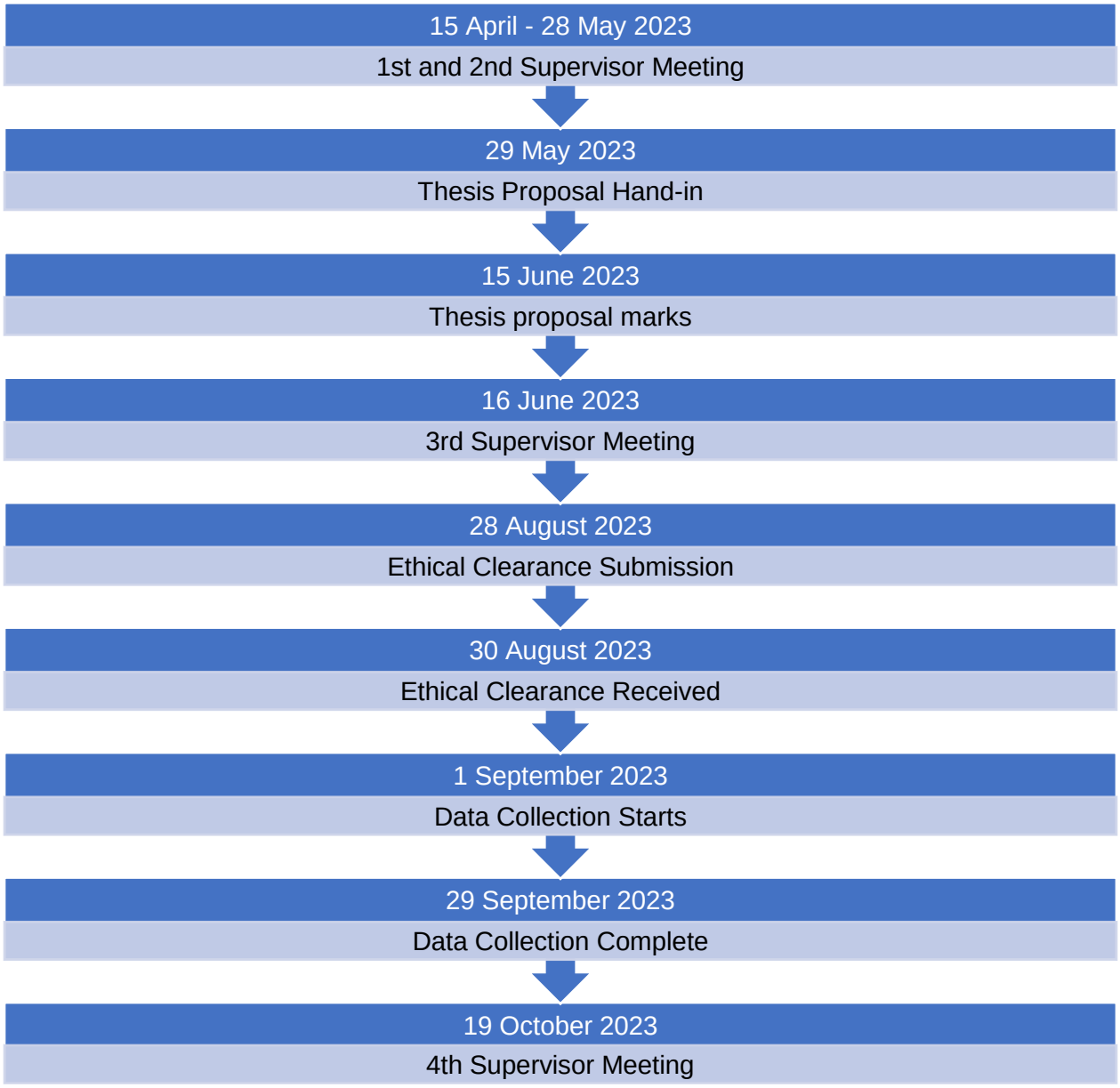

Figure 14: Timeline flow chart for thesis

Figure 15: Timeline flow chart for thesis

Appendix E – Consistency Matrix

Table 40: Methodologies used by study

RESEARCH QUESTIONS and HYPOTHESES	LITERATURE REVIEW	DATA COLLECTION TOOL	DATA ANALYSIS
Research Question 1: Do individuals have an impact on knowledge sharing within an organisation?	Ryan and Deci (2017); Yildiz et al. (2019); Allan et al. (2019); Lombardi et al. (2020); (Meyer et al., 2020); Gooderham et al. (2022); Houle et al. (2022); Bos-Nehles et al. (2023)	44 question survey Question 1-9, 10-13, 14-17, 18-20, 31-44	Coding Correlation Matrix Exploratory Factor Analysis Exploratory Factor Analysis Multilevel Regressions
Research Question 2: Does organisational culture have an impact on knowledge sharing?	(Najafi-Tavani et al., 2018); Gooderham et al. (2022); Wijethilake et al. (2023)	44 question survey Question 1-9, 14-17, 21-24	Coding Correlation Matrix Exploratory Factor Analysis Exploratory Factor Analysis Multilevel Regressions
Research Question 3: Does national culture have an impact on knowledge sharing?	Chen et al. (2018); Kubicek et al. (2019); Nash and Patel (2019); Swoboda and Sinning (2020)	44 question survey Question 1-9, 14-17, 25	Coding Correlation Matrix Exploratory Factor Analysis Exploratory Factor Analysis Multilevel Regressions

Appendix F – Response rate per question

Q1 BUI_1 What business unit within CIB do you work in?

Table 41: Results Q1 BUI_1

Items		Frequency	Percent
Valid	Business Enablement (COO)	**21**	**4.4**
	Compliance	**13**	**2.7**
	Coverage	**69**	**14.4**
	Finance	**34**	**7.1**
	Global Markets	**117**	**24.5**
	IBD	**41**	**8.6**
	Legal	**16**	**3.3**
	Operations	**40**	**8.4**
	Risk	**32**	**6.7**
	Strategy	**12**	**2.5**
	Technology	**24**	**5.0**
	TB	**52**	**10.9**
	Total answered questions	**471**	**98.5**
Missing	**Unanswered questions**	**7**	**1.5**
Toal No. of respondents		**478**	**100**

Q2 BUI_2 If you are in Global Markets, which business unit are you in?

Table 42: Results Q2 BUI_2

Items		Frequency	Percent
Valid	COO	**4**	**3.4**
	Quants and Data	**2**	**1.2**
	Research	**13**	**11.1**
	Sales and Structuring	**57**	**48.7**
	TCU	**8**	**6.8**
	Trading	**32**	**27.4**
	Total answered questions	**116**	**99.1**
Missing	**Unanswered questions**	**1**	**0.9**
Toal No. of respondents		**117**	**100**

Q3 BUI_3 If you are in IBD, which business unit are you in?

Table 43: Results Q3 BUI_3

Items		Frequency	Percent
Valid	CPF	**20**	**48.8**
	IBD	**16**	**39.0**
	Total answered questions	**36**	**87.8**
Missing	**Unanswered questions**	**5**	**12.2**
Toal No. of respondents		**41**	**100**

Q4 KS_1 How often do you share knowledge with other business units about customer groups and markets?

Table 44: Results Q4 KS_1

Likert Scale Option		Frequency	Percent
Valid	Never	**45**	**9.4**
	Very Rarely	**50**	**10.5**
	Rarely	**85**	**17.8**
	About Half the Time	**67**	**14.0**
	Often	**84**	**17.6**
	Very Often	**69**	**14.4**
	Always	**52**	**10.9**
	Total answered questions	**452**	**96.4**
Missing	**Unanswered questions**	**26**	**5.4**
Toal No. of respondents		**478**	**100**

Q5 KS_2 How often do you share knowledge with other business units on new product development?

Table 45: Results Q5 KS_2

Likert Scale Option		Frequency	Percent
Valid	Never	**58**	**12.1**
	Very Rarely	**63**	**13.2**
	Rarely	**87**	**18.2**
	About Half the Time	**82**	**17.2**
	Often	**92**	**19.2**
	Very Often	**38**	**7.9**
	Always	**33**	**3.9**
	Total answered questions	**453**	**94.8**
Missing	**Unanswered questions**	**25**	**5.2**
Toal No. of respondents		**478**	**100**

Q6 KS_3 How often do you share knowledge with other business units about how to use the firm's technology infrastructure?

Table 46: Results Q6 KS_3

Likert Scale Option		Frequency	Percent
Valid	Never	**64**	**13.4**
	Very Rarely	**71**	**14.9**
	Rarely	**104**	**21.8**
	About Half the Time	**73**	**15.3**
	Often	**67**	**14.0**
	Very Often	**45**	**9.4**
	Always	**27**	**5.6**
	Total answered questions	**451**	**94.4**
Missing	**Unanswered questions**	**27**	**5.6**
Toal No. of respondents		**478**	**100**

Q7 KS_4 How often do you share knowledge with other business units about new insights about customers?

Table 47: Results Q7 KS_4

Likert Scale Option		Frequency	Percent
Valid	Never	**4**	**0.8**
	Very Rarely	**4**	**0.8**
	Rarely	**3**	**0.6**
	About Half the Time	**21**	**4.4**
	Often	**43**	**9.0**
	Very Often	**135**	**28.2**
	Always	**266**	**55.6**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q8 KS_5 How often do you share knowledge with other business units about how your business unit operates?

Table 48: Results Q8 KS_5

Likert Scale Option		Frequency	Percent
Valid	Never	**24**	**5.0**
	Very Rarely	**43**	**9.0**
	Rarely	**60**	**12.6**
	About Half the Time	**67**	**14.0**
	Often	**102**	**21.3**
	Very Often	**92**	**19.2**
	Always	**64**	**13.4**
	Total answered questions	**452**	**94.6**
Missing	**Unanswered questions**	**26**	**5.4**
Toal No. of respondents		**478**	**100**

Q9 KS_6 How often do you share knowledge with other business units about your business unit's relationship with a client?

Table 49: Results Q9 KS_6

Likert Scale Option		Frequency	Percent
Valid	Never	**64**	**13.4**
	Very Rarely	**44**	**9.2**
	Rarely	**56**	**11.7**
	About Half the Time	**81**	**16.9**
	Often	**81**	**16.9**
	Very Often	**64**	**13.4**
	Always	**63**	**13.2**
	Total answered questions	**153**	**94.8**
Missing	**Unanswered questions**	**25**	**5.2**
Toal No. of respondents		**478**	**100**

Q10 IC_1 Do you have a master's degree?

Table 50: Results Q10 IC_1

Items		Frequency	Percent
Valid	Yes	**138**	**28.9**
	No	**315**	**65.9**
	Total answered questions	**453**	**94.8**
Missing	**Unanswered questions**	**25**	**5.2**
Toal No. of respondents		**478**	**100**

Q11 IC_2 Have you participated in management training?

Table 51: Results Q11 IC_2

Items		Frequency	Percent
Valid	Yes	**274**	**57.3**
	No	**179**	**37.4**
	Total answered questions	**453**	**94.8**
Missing	**Unanswered questions**	**25**	**5.2**
Toal No. of respondents		**478**	**100**

Q12 IC_3 Have you done specialized training in your area of expertise?

Table 52: Results Q12 IC_3

Items		Frequency	Percent
Valid	Yes	**274**	**57.3**
	No	**179**	**37.4**
	Total answered questions	**453**	**94.8**
Missing	**Unanswered questions**	**25**	**5.2**
Toal No. of respondents		**478**	**478**

Q13 IC_4 Have you been recognized as an expert in the company?

Table 53: Results Q13 IC_4

Items		Frequency	Percent
Valid	Yes	**203**	**42.5**
	No	**271**	**56.7**
	Total answered questions	**474**	**99.2**
Missing	**Unanswered questions**	**4**	**0.8**
Toal No. of respondents		**478**	**100**

Q14 IM_1 I find it personally satisfying to share knowledge.

Table 54: Results Q14 IM_1

Items		Frequency	Percent
Valid	Strongly Disagree	**6**	**1.3**
	Moderately Disagree	**1**	**0.2**
	Slightly Disagree	**4**	**0.8**
	Undecided	**18**	**3.8**
	Slightly Agree	**56**	**11.7**
	Moderately Agree	**124**	**25.9**
	Strongly Agree	**169**	**56.3**
	Total answered questions	**479**	**100**
Missing	**Unanswered questions**	**0**	**0**
Toal No. of respondents		**478**	**100**

Q15 IM_2 I like sharing knowledge.

Table 55: Results Q15 IM_2

Items		Frequency	Percent
Valid	Strongly Disagree	**5**	**1.0**
	Moderately Disagree	**2**	**0.4**
	Slightly Disagree	**4**	**0.8**
	Undecided	**13**	**2.7**
	Slightly Agree	**48**	**10.0**
	Moderately Agree	**126**	**26.4**
	Strongly Agree	**279**	**58.4**
	Total answered questions	**477**	**99.8**
Missing	**Unanswered questions**	**1**	**0.2**
Toal No. of respondents		**478**	**100**

Q16 IM_3 I think it is an important part of my job to share knowledge.

Table 56: Results Q16 IM_3

Items		Frequency	Percent
Valid	Strongly Disagree	**4**	**0.8**
	Moderately Disagree	**5**	**1.0**
	Slightly Disagree	**2**	**0.4**
	Undecided	**15**	**3.1**
	Slightly Agree	**38**	**7.9**
	Moderately Agree	**108**	**22.6**
	Strongly Agree	**304**	**63.6**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q17 IM_4 I feel I have knowledge that can be useful for others.

Table 57: Results Q17 IM_4

Items		Frequency	Percent
Valid	Strongly Disagree	**4**	**0.8**
	Moderately Disagree	**4**	**0.8**
	Slightly Disagree	**3**	**0.6**
	Undecided	**21**	**4.4**
	Slightly Agree	**43**	**9.0**
	Moderately Agree	**135**	**28.2**
	Strongly Agree	**266**	**55.6**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q18 IO_1 Have you been recognized as an expert in the company?

Table 58: Results Q18 IO_1

Items		Frequency	Percent
Valid	Yes	**155**	**32.4**
	No	**322**	**67.4**
	Total answered questions	**477**	**99.8**
Missing	**Unanswered questions**	**1**	**0.2**
Toal No. of respondents		**478**	**100**

Q19 IO_2 Have you participated in general training with other business units?

Table 59: Results Q19 IO_2

Items		Frequency	Percent
Valid	Yes	**261**	**54.6**
	No	**214**	**44.8**
	Total answered questions	**475**	**99.4**
Missing	**Unanswered questions**	**3**	**0.6**
Toal No. of respondents		**478**	**100**

Q20 IO_3 Have you participated in seminars and workshops involving other business units?

Table 60: Results Q20 IO_3

Items		Frequency	Percent
Valid	Yes	**251**	**52.5**
	No	**227**	**47.5**
	Total answered questions	**478**	**100**
Missing	**Unanswered questions**	**0**	**0**
Toal No. of respondents		**478**	**100**

Q21 COC_1 My department works in collaboration with others.

Table 61: Results Q21 COC_1

Items		Frequency	Percent
Valid	Most Uncharacteristic	**5**	**1.0**
	Moderately Disagree Uncharacteristic	**7**	**1.5**
	Slightly Disagree Uncharacteristic	**17**	**3.6**
	About Half the Time	**50**	**10.5**
	Often Characteristic	**72**	**15.1**
	Usually Characteristic	**123**	**25.7**
	Most Characteristic	**200**	**41.8**
	Total answered questions	**474**	**99.2**
Missing	**Unanswered questions**	**4**	**0.8**
Toal No. of respondents		**478**	**100**

Q22 COC_2 I My department is team oriented.

Table 62: Results Q22 COC_2

Items		Frequency	Percent
Valid	Most Uncharacteristic	**8**	**1.7**
	Moderately Disagree Uncharacteristic	**12**	**2.5**
	Slightly Disagree Uncharacteristic	**11**	**2.3**
	About Half the Time	**39**	**8.2**
	Often Characteristic	**64**	**13.4**
	Usually Characteristic	**127**	**26.6**
	Most Characteristic	**213**	**44.6**
	Total answered questions	**474**	**99.2**
Missing	**Unanswered questions**	**4**	**0.8**
Toal No. of respondents		**478**	**100**

Q23 COC_3 My department is cooperative.

Table 63: Results Q23 COC_3

Items		Frequency	Percent
Valid	Most Uncharacteristic	**4**	**0.8**
	Moderately Disagree Uncharacteristic	**7**	**1.5**
	Slightly Disagree Uncharacteristic	**4**	**0.8**
	About Half the Time	**39**	**8.2**
	Often Characteristic	**60**	**12.6**
	Usually Characteristic	**146**	**30.5**
	Most Characteristic	**217**	**45.4**
	Total answered questions	**477**	**99.8**
Missing	**Unanswered questions**	**1**	**0.2**
Toal No. of respondents		**478**	**100**

Q24 COC_4 My department is supportive.

Table 64: Results Q64 COC_4

Items		Frequency	Percent
Valid	Most Uncharacteristic	**6**	**1.3**
	Moderately Disagree Uncharacteristic	**7**	**1.5**
	Slightly Disagree Uncharacteristic	**15**	**3.1**
	About Half the Time	**31**	**6.5**
	Often Characteristic	**63**	**13.2**
	Usually Characteristic	**150**	**31.4**
	Most Characteristic	**204**	**42.7**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q31 WB_1 I am rewarded financially for my contributions

Table 65: Results Q31 WB_1

Items		Frequency	Percent
Valid	Strongly Disagree	**34**	**7.1**
	Moderately Disagree	**31**	**6.5**
	Slightly Disagree	**36**	**7.5**
	Undecided	**78**	**16.3**
	Slightly Agree	**128**	**26.8**
	Moderately Agree	**121**	**25.3**
	Strongly Agree	**49**	**10.3**
	Total answered questions	**477**	**99.8**
Missing	**Unanswered questions**	**1**	**0.2**
Toal No. of respondents		**478**	**100**

Q32 WB_2 The processes for determining pay in our organisation seem fair and unbiased.

Table 66: Results Q32 WB_2

Items		Frequency	Percent
Valid	Strongly Disagree	**55**	**11.5**
	Moderately Disagree	**35**	**7.3**
	Slightly Disagree	**54**	**11.3**
	Undecided	**128**	**26.8**
	Slightly Agree	**82**	**17.2**
	Moderately Agree	**83**	**17.4**
	Strongly Agree	**40**	**8.4**
	Total answered questions	**477**	**99.8**
Missing	**Unanswered questions**	**1**	**0.2**
Toal No. of respondents		**478**	**100**

Q33 WB_3 I can have well-informed and constructive conversations with my manager about pay.

Table 67: Results Q33 WB_3

Items		Frequency	Percent
Valid	Strongly Disagree	**40**	**8.4**
	Moderately Disagree	**32**	**6.7**
	Slightly Disagree	**38**	**7.9**
	Undecided	**85**	**17.8**
	Slightly Agree	**88**	**18.4**
	Moderately Agree	**106**	**22.2**
	Strongly Agree	**86**	**18.0**
	Total answered questions	**475**	**99.4**
Missing	**Unanswered questions**	**3**	**0.6**
Toal No. of respondents		**478**	**100**

Q34 WB_4 Are your immediate co-workers committed to the organisation's goals?

Table 68: Results Q34 WB_4

Items		Frequency	Percent
Valid	Strongly Disagree	**7**	**1.5**
	Moderately Disagree	**6**	**1.3**
	Slightly Disagree	**9**	**1.9**
	Undecided	**52**	**10.9**
	Slightly Agree	**82**	**17.2**
	Moderately Agree	**167**	**34.9**
	Strongly Agree	**155**	**32.4**
	Total answered questions	**478**	**100**
Missing	**Unanswered questions**	**0**	**0**
Toal No. of respondents		**478**	**100**

Q35 WB_5 Do you find your work engaging?

Table 69: Results Q35 WB_5

Items		Frequency	Percent
Valid	Strongly Disagree	**8**	**1.7**
	Moderately Disagree	**8**	**1.7**
	Slightly Disagree	**8**	**1.7**
	Undecided	**25**	**5.2**
	Slightly Agree	**57**	**11.9**
	Moderately Agree	**165**	**34.5**
	Strongly Agree	**205**	**42.9**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q36 WB_6 Do you feel the workload is spread fairly among your team members?

Table 70: Results Q36 WB_6

Items		Frequency	Percent
Valid	Strongly Disagree	**39**	**8.2**
	Moderately Disagree	**23**	**4.8**
	Slightly Disagree	**55**	**11.5**
	Undecided	**50**	**10.5**
	Slightly Agree	**88**	**18.4**
	Moderately Agree	**126**	**26.4**
	Strongly Agree	**94**	**19.7**
	Total answered questions	**475**	**99.4**
Missing	**Unanswered questions**	**3**	**0.6**
Toal No. of respondents		**478**	**100**

Q37 WB_7 Do you have opportunities for advancement or promotion at this organisation?

Table 71: Results Q37 WB_7

Items		Frequency	Percent
Valid	Strongly Disagree	**70**	**14.6**
	Moderately Disagree	**38**	**7.9**
	Slightly Disagree	**38**	**7.9**
	Undecided	**83**	**17.4**
	Slightly Agree	**73**	**15.3**
	Moderately Agree	**103**	**21.5**
	Strongly Agree	**70**	**14.6**
	Total answered questions	**475**	**99.4**
Missing	**Unanswered questions**	**3**	**0.6**
Toal No. of respondents		**478**	**100**

Q38 WB_8 Does your immediate manager regularly coach you on your job performance?

Table 72: Results Q38 BUI_8

Items		Frequency	Percent
Valid	Strongly Disagree	**34**	**7.1**
	Moderately Disagree	**36**	**7.5**
	Slightly Disagree	**26**	**5.4**
	Undecided	**58**	**12.1**
	Slightly Agree	**86**	**18.0**
	Moderately Agree	**113**	**23.6**
	Strongly Agree	**123**	**25.7**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q39 WB_9 Do you trust this organisation to be fair to all employees?

Table 73: Results Q39 WB_9

Items		Frequency	Percent
Valid	Strongly Disagree	**40**	**8.4**
	Moderately Disagree	**28**	**5.9**
	Slightly Disagree	**53**	**11.1**
	Undecided	**107**	**22.4**
	Slightly Agree	**94**	**19.7**
	Moderately Agree	**100**	**20.9**
	Strongly Agree	**54**	**11.3**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q40 WB_10 Do you feel like you belong here?

Table 74: Results Q40 WB_10

Items		Frequency	Percent
Valid	Strongly Disagree	**20**	**4.2**
	Moderately Disagree	**12**	**2.5**
	Slightly Disagree	**23**	**4.8**
	Undecided	**49**	**10.3**
	Slightly Agree	**69**	**14.4**
	Moderately Agree	**144**	**30.1**
	Strongly Agree	**157**	**32.8**
	Total answered questions	**474**	**99.2**
Missing	**Unanswered questions**	**4**	**0.8**
Toal No. of respondents		**478**	**100**

Q41 WB_11 Do you understand the company's plans for future success?

Table 75: Results Q41 WB_11

Items		Frequency	Percent
Valid	Strongly Disagree	**10**	**2.1**
	Moderately Disagree	**8**	**1.7**
	Slightly Disagree	**21**	**4.4**
	Undecided	**48**	**10.0**
	Slightly Agree	**92**	**19.2**
	Moderately Agree	**159**	**33.3**
	Strongly Agree	**134**	**28.0**
	Total answered questions	**472**	**98.7**
Missing	**Unanswered questions**	**6**	**1.3**
Toal No. of respondents		**478**	**100**

Q42 WB_12 Do you know how you fit into the organisation's future?

Table 76: Results Q42 WB_12

Items		Frequency	Percent
Valid	Strongly Disagree	**14**	**2.9**
	Moderately Disagree	**13**	**2.7**
	Slightly Disagree	**22**	**4.6**
	Undecided	**69**	**14.4**
	Slightly Agree	**106**	**22.2**
	Moderately Agree	**146**	**30.5**
	Strongly Agree	**105**	**22.0**
	Total answered questions	**475**	**99.4**
Missing	**Unanswered questions**	**3**	**0.6**
Toal No. of respondents		**478**	**100**

Q43 WB_13 I am proud to work for my company.

Table 77: Results Q43 WB_13

Items		Frequency	Percent
Valid	Strongly Disagree	**4**	**0.8**
	Moderately Disagree	**5**	**1.0**
	Slightly Disagree	**6**	**1.0**
	Undecided	**34**	**7.1**
	Slightly Agree	**61**	**12.8**
	Moderately Agree	**157**	**32.8**
	Strongly Agree	**210**	**43.9**
	Total answered questions	**476**	**99.6**
Missing	**Unanswered questions**	**2**	**0.4**
Toal No. of respondents		**478**	**100**

Q44 WB_14 Overall, how satisfied are you working for the firm?

Table 78: Results Q44 WB_14

Items		Frequency	Percent
Valid	Strongly Disagree	**2**	**0.4**
	Moderately Disagree	**9**	**1.9**
	Slightly Disagree	**11**	**2.3**
	Undecided	**38**	**7.9**
	Slightly Agree	**86**	**18.0**
	Moderately Agree	**180**	**37.7**
	Strongly Agree	**148**	**31.0**
	Total answered questions	**474**	**99.2**
Missing	**Unanswered questions**	**4**	**0.8**
Toal No. of respondents		**478**	**100**

Appendix G – Detailed reliability test results – Cronbach's alpha and Macdonald's omega

Construct One: Knowledge Sharing

Table 79: Results of knowledge sharing

Reliability Statistics KS					
Cronbach's Alpha		**Macdonald's Omega**	**Average Variance**	**No. of Items**	
0.90		0.92	0.66	6	
Item-Total Statistics KS					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q4 KS_1	19.9	0.70	0.73	0.56	0.88
Q5 KS_2	20.3	0.71	0.75	0.59	0.88
Q6 KS_3	20.5	0.75	0.62	0.43	0.90
Q7 KS_4	20.2	0.68	0.77	0.64	0.87
Q8 KS_5	19.5	0.73	0.70	0.57	0.88
Q9 KS_6	19.9	0.68	0.77	0.65	0.87

Construct Two: Intrinsic Motivation

Table 80: Results of intrinsic motivation

Reliability Statistics IM					
Cronbach's Alpha		**Macdonald's Omega**	**Average Variance**	**No. of Items**	
0.91		0.93	0.78	4	
Item-Total Statistics IM					
	Scale Mean if Item Deleted	Scale AVE if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q14 IM_1	19.0	0.57	0.80	0.78	0.87
Q15 IM_2	19.0	0.56	0.87	0.83	0.85
Q16 IM_3	18.9	0.59	0.78	0.62	0.88
Q17 IM_4	19.0	0.61	0.71	0.52	0.91

Construct Three: Collaborative Organisational Culture

Table 81: Results of collaborative organisational culture

Reliability Statistics COC					
Cronbach's Alpha		**Macdonald's Omega**	**Average Variance**	**No. of Items**	
0.85		0.90	0.70	4	
Item -Total Statistics COC					
	Scale Mean if Item Deleted	Scale AVE if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q21 DCC_1	17.9	0.66	0.49	0.25	0.89
Q22 DCC_2	17.8	0.54	0.77	0.64	0.78
Q23 DCC_3	17.7	0.58	0.82	0.71	0.76
Q24 DCC_4	17.8	0.58	0.72	0.61	0.80

Construct Four: Well-being

Table 82: Results of well-being

Reliability Statistics WB					
Cronbach's Alpha		**Macdonald's Omega**	**Average Variance**	**No. of Items**	
0.91		0.93	0.48	14	
Item -Total Statistics WB					
	Scale Mean if Item Deleted	Scale AVE if Item Deleted	Corrected Item - Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q31 WB_1	67.6	0.87	0.57	0.50	0.91
Q32 WB_2	68.1	0.86	0.58	0.51	0.91
Q33 WB_3	67.5	0.84	0.65	0.53	0.90
Q34 WB_4	66.5	0.91	0.56	0.40	0.91
Q35 WB_5	66.2	0.91	0.54	0.37	0.91
Q36 WB_6	67.4	0.85	0.60	0.42	0.91
Q37 WB_7	66.2	0.83	0.62	0.48	0.91
Q38 WB_8	67.4	0.84	0.64	0.49	0.90
Q39 WB_9	67.9	0.84	0.72	0.57	0.90
Q40 WB_10	67.3	0.84	0.75	0.63	0.90
Q41 WB_11	67.8	0.89	0.58	0.4	0.91
Q42 WB_12	66.9	0.87	0.68	0.57	0.90
Q43 WB_13	66.2	0.91	0.60	0.66	0.91
Q44 WB_14	66.4	0.89	0.70	0.68	0.90

Appendix H – Demographic tables

Table 83: Respondent's gender

Gender	Respondents (n)	Percentage (%)
Male	205	42.9%
Female	245	51.3%
Prefer not to say	21	5.8%
Non-binary	0	0%
TOTAL	471	100%

Table 84: Respondent's tenure at firm

Years worked	Respondents (n)	Percentage (%)
Less than 1	37	7.7%
1 – 5	116	24.3%
6 – 10	116	24.3%
11 – 15	87	18.2%
16 – 20	47	9.8%
21 – 25	27	5.6%
26 – 30	20	4.2%
More than 30	25	5.2%
TOTAL	475	100%

Table 85: Respondent's tenure in industry

Years worked	Respondents (n)	Percentage (%)
Less than 1	8	1.7%
1 – 5	31	6.5%
6 – 10	75	15.7%
11 – 15	87	18.2%
16 – 20	83	17.4%
21 – 25	70	14.6%
26 – 30	59	12.3%
More than 30	63	13.2%
Total	476	100%

Table 86: Respondent's departmental size in numbers of people

No. Of People	Respondents (n)	Percentage (%)
0 – 1	3	0.6%
2 – 5	55	11.5%
6 – 10	84	17.6%
11 – 15	80	16.7%
16 – 20	56	11.7%
21 – 50	67	14.0%
51 – 100	55	11.5%
More than 30	75	15.7%
Total	475	100%

Appendix I – Harman's single factor test results

Table 87: Harman's factor test for knowledge sharing

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	3.97	66.22	66.22	3.58	59.68	59.678
2	0.62	10.36	76.58			
3	0.50	8.41	84.99			
4	0.37	6.08	91.07			
5	0.31	5.10	96.16			
6	0.23	3.84	100.00			

Extraction Method: Principal Axis Factoring

Table 88: Harman's factor test for individual ability

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	1.55	38.68	38.68	0.81	20.23	20.23
2	0.98	24.37	63.04			
3	0.79	19.65	82.70			
4	0.69	17.30	100.00			

Extraction Method: Principal Axis Factoring

Table 89: Harman's factor test for intrinsic motivation

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	3.128	78.19	78.19	2.86	71.49	71.49
2	0.471	11.78	89.98			
3	0.292	7.30	97.27			
4	0.109	2.73	100.00			

Extraction Method: Principal Axis Factoring

Table 90: Harman's factor test for individual opportunities

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	0.39	54.61	54.61	0.26	36.74	36.74
2	0.19	26.82	81.42			
3	0.13	18.58	100.00			

Extraction Method: Principal Axis Factoring

Table 91: Harman's factor test for wellbeing

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	6.70	47.82	47.82	6.15	43.95	43.95
2	1.31	9.35	57.17			
3	0.98	6.97	64.14			
4	0.85	6.08	70.21			
5	0.68	4.83	75.04			
6	0.58	4.15	79.19			
7	0.57	4.07	83.26			
8	0.47	3.33	86.60			
9	0.40	2.84	89.44			
10	0.35	2.52	91.96			
11	0.32	2.31	94.27			
12	0.31	2.23	96.49			
13	0.29	2.07	98.56			
14	0.20	1.44	100.00			

Extraction Method: Principal Axis Factoring

Table 92: Harman's factor test for collaborative organisational culture

Component	Total Variance Explained					
	Initial Eigenvalues			Loadings		
	Total	% of var.	Cum. %	Total	% of var.	Cum. %
1	2.82	70.38	70.38	2.82	70.38	70.38
2	0.68	17.09	87.46			
3	0.30	7.60	95.06			
4	0.20	4.94	100.00			

Extraction Method: Principal Axis Factoring

Appendix J – Survey email

Dear Colleague,

As part of Absa's commitment to a culture of knowledge and growth among colleagues, we invite you to participate in the **Absa CIB Knowledge Sharing Survey**.

Why the survey is important?

The purpose of this survey is to review Absa CIB colleagues' knowledge sharing abilities, which are the lynchpin of our corporate arsenal. Additionally, we are investigating the effect of culture within CIB.

What do you need to do?

Please use the link provided below to complete the online survey. It is important to note that this link is unique to you and should not be forwarded or shared with anyone else.

Click HERE to start survey.

The survey will take no more than 9 minutes for you to complete.

By when do you need to do this?

To make sure that your voice is heard, please complete the survey before 17h00 on Friday 29 September 2023. The survey is always on, so you can fill it in at a time that best suits you but remember it closes on that day.

Important things to know:

- In line with the work, we are doing on the Thematic Ideas Strategy, Knowledge Sharing and Culture within Absa CIB across all our global offices.
- There are no right or wrong answers.
- Your participation is voluntary, and you can withdraw at any time without penalty.
- Your participation is anonymous and only aggregated data will be reported.
- By completing the survey, you indicate that you voluntarily participate in this research.
- If you have any concerns, please contact Daneel Van Eek here or Rufaro Daring Mapanda

Add your voice to what matters and complete the survey today.

Kind regards,

Rufaro Daring Mapanda