

The flow of knowledge via network collaboration and its contribution to business model innovation: A case study of Namibia Public Enterprises

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ABSTRACT

It is widely recognised that the fourth industrial revolution is characterised by many challenges, including climate change, public health crises, growth in technology, digital transformation, and intelligent business operations. Since the disruption of services and operations of services by the global health pandemic that erupted in 2019, debates have increased on the ability and capabilities, especially harnessing knowledge as intangible assets to innovate and better response to the evolving business and geo-political landscape. In Namibia, special attention is paid to the public Sector (SOEs) that is responsible for providing basic services. There is a growing concern about how these entities can continuously enhance and provide services in the face of numerous challenges.

This study explored the flow of knowledge from network collaboration as a dimension of knowledge management and its contribution to the business model innovation of public sectors in Namibia. A better understanding of this phenomenon is crucial because it enables organisations to better manage and leverage the knowledge to unlock their potential to benefit society, industry, and the government. The research findings indicate that State-Owned Enterprises (SOEs) engage in collaborative activities that enhance their knowledge capabilities. Furthermore, those SOEs that effectively manage and utilize advanced tools and technologies in their knowledge flow process make more significant contributions to the innovation of their business models.

This study employed a qualitative research methodology. A total of 14 semi-structured interviews were conducted with individuals who held various positions within Namibian State-Owned Enterprises (SOEs) and possessed substantial work experience. The purposive sampling method was used to select research participants. All interviews were conducted in person, recorded, transcribed, and subsequently subjected to thematic analysis using the Atlas Ti management system. The key findings of this research indicate that knowledge streams from networking and collaborations help organisations to gain valuable knowledge that contributes to the innovation of their business models. These findings will enable SOEs to enhance collaboration and build organisation capabilities through networking and collaboration to influence BMI.

Keywords: Knowledge Management; Business Model Innovation; Knowledge Stream from Network and collaborations

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 with Specialisation in Corporate Strategy 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.

Signed: 22030396 **27 November 2023**
Date

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ABBREVIATIONS AND ACRONYMS

SOEs	State-Owned Enterprises
BMI	Business Model Innovation
4IR	Fourth Industrial Revolution

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CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

1.1. Introduction

Since the beginning of the 21st century, scholars have developed a keen interest in understanding the role of intangible assets, particularly knowledge, in shaping organizational performance (Fakhar Manesh et al., 2021). Although a substantial body of literature has established a positive relationship between knowledge management and business model innovation in private sectors (Hock-Doepgen et al., 2021; Latifi et al., 2021), there is a dearth of research in these areas, particularly in their application to public sectors (Agarwal et al., 2021). This study explored the flow of knowledge from network collaboration as a dimension of knowledge management and its contribution to the business model innovation of public sectors in Namibia. A better understanding of this phenomenon is crucial because it enables organisations to better manage and leverage the knowledge to unlock their potential to benefit society, industry, and the government.

Furthermore, the existing research has primarily focused on upper-income countries and profit-making organizations (Hock-Doepgen et al., 2021; Latifi et al., 2021), leaving a significant gap in the literature on the role of knowledge management in the public sector. The public sector's setting and operations are far different from those of the private sector because the public sector is more of a regulated environment; henceforth, the private sector finding is not one size fits all. Thus, exploring this body of literature in the context of Africa, particularly in Namibia, offered a unique opportunity to understand the applicability of existing theoretical constructs to the public sector and the degree to which external knowledge, mainly through network collaborations, influences an organisation's business model innovation.

This chapter of the study serves as the introduction to the problem statement. Specifically, it focuses on the background of the research problem, defining the problem statement, articulating the research objectives and questions, and providing the study's motivation and justification. In furtherance from the above, it also covers the scope and limitations of the study. Finally, the chapter concludes with the structure of the study.

1.2. Background to the Research Problem

The 21st century is characterised by climate change, public health crises, growth in technology, digital transformation and intelligent business operations, referred to as the antecedent of the Fourth Industrial Revolution (4IR) (Chirumalla, 2021). According to Fakhar Manesh et al. (2021), the fourth industrial revolution has disrupted the way of doing business, interface, and service delivery. With the challenges of the fourth industrial revolution (4IR), in the year 2019, the world experienced one of the global health crises, termed COVID-19 (Lim & Morris, 2023); this crisis affected organization operations and models of doing business due to limited physical interaction that was introduced to curb the speed of the virus. Consequently, debate on the ability of organisations and firms to continue to deliver and offer services amidst disruption has erupted and with much focus on business model innovation (Hussain et al., 2021) and organisational capabilities, particularly the intangible assets (knowledge management) as a catalyst for changes and better response to the evolving business and geo-political landscape (Santoro et al., 2021). Therefore, Knowledge Management (KM) become an essential component of organizational dynamic capabilities due to changes connected to digital transformation, global competition, and rapid technological advancements (Fakhar Manesh et al., 2021). Knowledge is described as a technical know-how of inventing a novel process or method of doing something (Chen et al., 2022a); it is considered dynamic (Hock-deepgen et al., 2021), and for this reason that it became a recent oil of the 21st century (Kianto et al., 2019); hence measures to manage this resources took to become a focus of all organisations (Hock-doepgen et al., 2021; Tsai et al., 2022).

Hock-doepgen et al., (2021) defined knowledge management as a propensity to learn, share and codify knowledge to increase organisation capabilities in creativity and innovation. In agreeing with Hock-doepgen et al., Fakhar Manesh et al., (2021) indicated that knowledge management involves procedures, practices, and technologies that facilitate the creation, transfer, and application of knowledge to enhance organisational performance and organisation strategic aspirations. In seeking business solutions in a volatile yet complex business landscape, knowledge management becomes a powerful tool and a principal organisational asset to leverage and gain a competitive edge.

In recent years, there has been a growing interest among profit-oriented organizations, mainly in the private sector, regarding the role of knowledge management in driving organizational changes and creating maximum value for consumers, shareholders, and society as a whole (Ferrerias-Méndez et al., 2021). This interest has been fuelled by recognising that the business model enables organizations to create and capture value. Snihur & Bocken, (2022) defined a business model as the structure that organizations adopt to create and capture value and to accomplish its purpose and function effectively; henceforth, a business model facilitates interactions between the organization and its consumers and stakeholders through a user-friendly and digitally oriented approach (Tallman et al., 2018).

According to Tallman et al. (2018), achieving a competitive business model requires organizations to deploy and leverage critical resources, including knowledge, to integrate and position them for better value creation. In light of this ambition, forward-thinking organisations are contemplating how to deliver services and products uninterrupted despite the rapid change in the market by prioritising innovation in their business models (Latifi et al., 2021), which involves reconfiguring and leveraging their dynamic capabilities (Teece, 2018; Teece & Linden, 2017). This position accentuates the importance of knowledge management and innovation within a business model. Business Model innovation "refers to the changes in the key elements of a firm's business model or the architecture linking these elements in a structured, novel and nontrivial way" (Latifi et al., 2021, p. 1). To this end, onward-looking organisations are pondering how to deliver their services and products under given circumstances by considering innovation in their business model (Latifi et al., 2021) by configuring and rearranging their dynamic abilities (Teece, 2018).

Hock-doepgen et al. (2021) conducted an empirical study focusing on knowledge management capabilities in the context of small and medium enterprises (SMEs). Their study aimed to understand the knowledge management factors contributing to business model innovation. With a sample size of 197 SMEs spanning various industries, astonishingly, the findings emphasized the limited knowledge in this area. Remarkably, the study concluded that effective knowledge management catalysed innovation, particularly in risk-taking private organizations; hence, the question that emerges from this finding is how knowledge management contributes to business model innovation in the public sector.

Furthermore, Hock-Doepgen et al. (2021) study only considered a few dimensions of knowledge management, such as storage, creation, and development; "however, firms often engage in network collaborations, providing them access to relevant knowledge coming from outside the firm" (Hock-doepgen et al., 2021, p. 695). Henceforth, they identified the need for further research to explore how knowledge from network collaboration as a dimension of knowledge management contributes to business model innovation in the public sector. This highlights the importance of understanding how knowledge streams arising from network collaborations contribute to business model innovation.

1.3. Definition of Research problem background

Knowledge Management (KM) in the 21st century gained momentum at the academic and corporate levels. The business world has undergone tremendous changes, and so have consumer expectations (Heidenreich et al., 2022). Past research has highlighted the importance of organisations in adapting and becoming agile to changes in the market (Clauss et al., 2021) hence the focus on business innovation models. (Latifi et al., 2021).

Hock-doepgen et al., (2021) noted the relevance and influence of knowledge management to a business innovation model during their qualitative study in Small and Medium Enterprises (SMEs). Their studies were limited; first, it was more on private sectors and with a limited population; additionally, the studies were done in developed economies (Latifi et al., 2021), making it difficult to generalise to other countries that falls below the upper-middle income country classifications and to far extend regulated or otherwise other sectors. Furthermore, there are few studies on the impact of knowledge management and innovation business innovation models in public sectors (Agarwal et al., 2021).

Therefore, this study used the dynamic capabilities theory to understand how knowledge from network collaboration as a dimension of knowledge management contributes to business model innovation in the public sector. DC theory offers valuable insights into how firms can enhance their knowledge-related resources to innovate and transform their business models given the evolvement of the business landscape (Haftor & Costa, 2023). Knowledge management is an essential component of DC theory, as it emphasised the importance of both internal and external knowledge resources in developing and deploying dynamic capabilities (Sunder M et al., 2021). Hence, this theory provides a comprehensive framework for this study as I explored

how firms can develop and manage knowledge to adapt to changing market conditions and innovate their business models through knowledge management.

1.4. Research problem and objectives

This research used dynamic capabilities theory as a competitive advantage framework to better understand the relationship between knowledge management and business model innovation of public enterprise. The business landscape and consumer preferences have drastically changed in recent years, which requires changes in organisations' business models (Clauss et al., 2021). Business model innovation refers to reconfiguring business architecture and operations to meet evolving market demands (Latifi et al., 2021; Tallman et al., 2018). Business model innovation is vital to this adaptation process, requiring organizations to reconfigure their business architecture and operations to meet evolving demands (Teece, 2018). To achieve innovation, organisations require the capabilities to make rapid changes and continue to provide services and products despite uncertainty (Teece, 2018).

Existing literature has demonstrated that knowledge is a powerful tool and a dynamic capability resource for firms and organisations; hence, how it is enhanced and developed has attracted the interest of scholars and business practitioners. While studies have shown how knowledge from internal and external sources can enhance and fuel innovation in the private sector (Leoni et al., 2022; Zhang et al., 2022); little is known about how knowledge stream arising network collaboration enhances business model innovation (Hock-Doepgen et al., 2021), particularly in private sectors (Agarwal et al., 2021). Given this gap in the body of knowledge, this study was aimed to better understand the relationship between knowledge management and business model innovation in the public sector, with a specific focus on the knowledge stream that arises from network collaborations described by (Hock-Doepgen et al., 2021). Therefore, the following question and sub-questions were to be answered in this study.

RQ1. How does the knowledge arising from network collaborations contribute to business model innovation?

The following sub-questions followed the main question.

- What are the key mechanisms and channels through which knowledge streams arise from network collaborations in the public sector?
- How do these knowledge streams from network collaborations contribute to business model innovation in the public sector?

A deeper understanding of the relationship between knowledge management specific to network collaborations and business model innovation provided valuable insights for the public sector. By exploring the power of networks and their relationship to business architecture, this study shed light on how organizations can leverage external capabilities to stimulate business model innovation. Moreover, this study contributes to the existing body of literature on knowledge management and business innovation models. Lastly, the study has the potential to provide practical implications and strategic recommendations for public sector organizations seeking to optimize their business model innovation through knowledge management and network collaborations.

1.5. Research relevance and motivation

The business landscape is constantly evolving, and with the rise of the knowledge-based economy, the importance of business models has only increased (Latifi et al., 2021). Business models are the foundation of any organization's operations and processes, so the ability to influence and adapt them is crucial in a rapidly changing and uncertain environment (Hussain et al., 2021). It applies to all organisations despite the size or organisation objectives. Business model innovation reshapes an organisation's business architecture to respond to consumer demands (Agarwal et al., 2021). Ultimately, this process offers the organisation an opportunity for differentiation to compete in the market (Teece, 2018).

Over the years, innovation has been on the rise. It is characterized by introducing creative and unique ideas, practices, and processes into an organization to enhance its business model. Scholars have recognized that knowledge is an organisation is a catalyst for innovation if it is well managed (Cui et al., 2020); however, it is not yet clear how knowledge arising from networks and collaborations is managed and developed in the public sector to impact business model innovation (Hock-Doepgen et al., 2021). The digital age has brought about significant changes in how businesses operate, and organizations must adapt to survive in a world of technological disruption(Cui et al., 2020).

Generally, each organization operates in the internal and external worlds. The external world comprises the organization's stakeholders, partners, and customers (Agarwal et al., 2021). Hock-doepgen et al., (2021) acknowledge limited studies on the relationship between knowledge management and business innovation models, particularly

knowledge from networks and collaborations. This study was seeking to understand how the knowledge stream arising from network collaborations contributes to business model innovation. Knowledge is a crucial capability of any organization, and this study focuses on one of its dimensions in the context of public sector organizations.

1.6. Scope of the research

The boundary of this study is considered divided into three sub-scopes as follows:

1.6.1. Field of study

The study was restricted to knowledge arising from network and collaboration as a knowledge management dimension and its contribution to business model innovation within the public sector as described by (Hock-Doepgen et al., 2021).

1.6.2. Geographical Demarcation

The scope of this study was limited to public enterprises headquartered in Windhoek, the capital city of Namibia. According to Limbo, (2019), approximately 92% of public enterprises in Namibia are headquartered in Windhoek. Therefore, this study focused on public enterprises in this geographical area to gain a deeper understanding of the impact of external knowledge on business model innovation.

1.6.3. Types of public enterprises organization

The scope of this study encompasses all types of public enterprise agencies regardless of their commercial or non-commercial purposes, provided that they are established to provide public services or operate in the public interest.

In Namibia, the public sector is made up of Ministries, Offices, and State-Owned Enterprises (SOEs) covering different markets such as education, minerals, and budgetary services. Parastatals play an important role in national economic development and by margin they account for over a fifth of the world's largest enterprises as opposed to 20 years ago where only one or two SOEs could be found at the top of the league table (Morake, 2012). This transformation means that high standards of operations and business models of SOEs are critical to ensure services delivery and welfare of citizen. In Namibia SOEs are regulated by Public Enterprise Governance Act (PEGA) Act 1/2019, although separately they might be established by

different Acts of parliaments.

SOEs are entities that are defined within section two of the Namibia Public Enterprise Governance Act (PEGA) Act 1/20190. They are classified as commercial and non-commercial public enterprises. These institutions are ultimately owned by the general public, and the government agencies who exercise the ownership rights are answerable to the general public (Public Enterprises Governance Act, 2019, 2019). By extension, SOE is a body formed by the government through legal means so that it can take part in activities of a commercial nature. Similarly, PWC (2015b) discussed SOEs to mean enterprises where the state has significant control through full, majority, or significant minority ownership; these include SOEs that the central government controls, as well as SOEs owned by regional and local governments.

Essentially, SOEs are created to undertake and deliver services on behalf of the government. They represent the extended arm of government providing key goods and services to the economy that would otherwise not be served by private enterprise, as well as playing an important regulatory role in domestic industrial capabilities that are essential in contributing to a Nation's prosperity and national well-being (Amaral et al., 2023). As a result, they are set up with state funds-monies, which might be misallocated because of the lack of timely reporting, monitoring, and scrutiny and often due to the limited enforcement of basic corporate governance principles (Tjiuai, 2007).

Similarly, Limbo (2019) stated that SOEs are important institutions of government and are mainly meant to provide basic services to the citizens. He argued that, as much as this is the expectation, SOEs are lagging behind and stuck in the old era of service provision where efficient and seamless is not the order of the day. Public entity operates in the same context as private entities; hence, they should also consistently consider the way of service delivery by assessing their business model from time to time, keeping the development in the business landscape. This study aims to explore how organizations can harness their external capabilities through networking and collaboration to develop knowledge, which in turn can influence their business model innovation.

Hock-doeppen et al. (2021,) pointed out that little is known about how knowledge is managed and flow into public sector and by far extend how public sector manage knowledge as a critical capability to reconfigure and integrate it mechanics and process of services for relevance (p. 686). With this premise is evidence that there is limited

empirical evidence that is relevant to understand the flow of knowledge from collaboration in SEOs. Huna stated that knowledge stream or flow is a vital component for knowledge, management, and every organisation that optimised enhances this process, leapfrogs in innovation and gains a competitive edge. Furthermore (Pepple et al., 2022, p. 509) concluded that organisations need to invest more in knowledge creation and utilisation in order to remain relevant. Given the take that the SOEs cover in the market and their roles of providing otherwise public welfare and services, it is no longer an option to gain a deeper understanding of how this sector benefits from collaboration and how they managed these inputs to grow and improve the business model. How platform gatekeeping affects knowledge sharing among complementors (Zhang et al., 2022).

1.7. Definition of key constructs

For this study, the constructs are defined as follows:

Knowledge Management is a "propensity to learn, share and codify the knowledge to gain firm competence" (Hock-Doepgen et al., 2021, p. 684).

Business Model Innovation "refers to the changes in the key elements of a firm's business model or the architecture linking these elements in a structured, novel and nontrivial way" (Latifi et al., 2021, p. 1).

Knowledge stream from Network collaborations "refers to the knowledge exchange and creation process that occurs when individuals or organizations engage in collaborative activities or networked relationships with key partners and customers" (Hock-doepgen et al., 2021, p. 695).

1.8. Research report layout

In a quest to answer the research questions that will provide insight into the sector and subject matter, this study will be structured as follows:

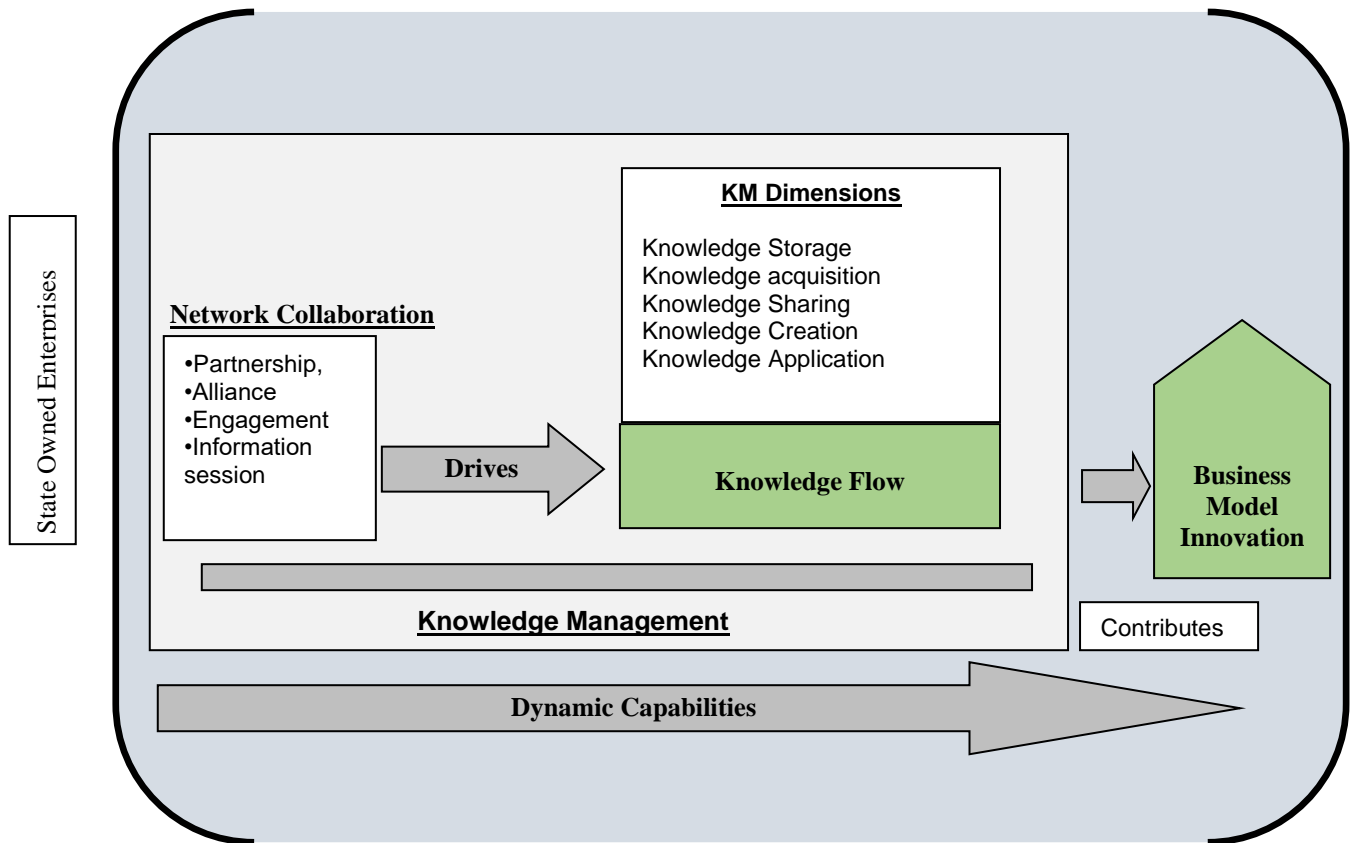
- Chapter 2: Literature Review to support the need for research from previous studies.
- Chapter 3: Research Question to demonstrate the questions to be answered.

- Chapter 4: Research Methodology, explaining and justifying the methodology adopted to answer the research question.
- Chapter 5: Data Analysis to draw meaning finding.
- Chapter 6: Discusses the findings and results in relation to the literature review presented in chapter 2
- Chapter 7: Conclusion: Summarise the research findings and draw conclusions about the results through knowledge activities, note research limitations and suggest areas for future studies.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This research study seeks to understand the relationship between Knowledge Management (KM), particularly knowledge from the networks collaboration stream and its contribution to Business Model Innovation (BMI) through the lens of Dynamic Capability theory (DC). Therefore, in this chapter, the researcher reviewed the literature on knowledge management and business model innovation. In order to capacitate the study and to provide guidance to the research, the researcher conducted a literature review by contextualise the constructs related to knowledge management, particularly the knowledge that results from networks and collaboration or being part of platforms and how it contributes to the business model innovation with a focus on public sectors.



Source: Author (2023)

Figure 1: Literature Review Framework

2.2 Dynamic Capabilities (DC) Perceptive

In today's volatile, uncertain, complex, and ambiguous (VUCA) business world, competition and technical know-how have become the order of the day (Baran & Woznyj, 2021). Organizations that prioritize unique and novel ideas are more profitable as they can compete and deliver fit-for-purpose products and services despite changes in the business landscape (K. Chen & Huan, 2022) and as competition grows, attention is increasingly focused on unique and dynamic organizational resources, skills, and abilities that enable firms to compete effectively despite challenges (Baran & Woznyj, 2021).

One theoretical framework that has emerged as particularly relevant in this context is the Dynamic Capabilities (DC) theory, first developed by David Teece and his colleagues in 1997. DC theory is defined as the "ability of an organization to reconfigure, reorganize, and review its internal and external resources to fit the dynamic business environment" (Teece et al., 1997). Oliver et al. (2019) support this view, noting that "the dynamic capabilities approach analyses an organization's competencies and skills responsible for creating wealth and sustaining competitive advantages". Similar to this conceptualisation, Heaton et al., (2023), explained DC as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (p. 521).

DC theory was developed to address the challenges of the rapidly changing business environment, with a focus on how organizations can identify and seize opportunities for innovation (Baran & Woznyj, 2021); that is why the "ways in which organisation scan and take up opportunities is the cornerstone of the DC theory" (Oliver et al., 2019, p. 2); hence the theory has become a powerful tool for strategic change in organizations, enabling them to adapt to changing circumstances and maintain a competitive edge (Baran & Woznyj, 2021).

The Dynamic Capabilities theory is based on several key assumptions critical to understanding how organizations can achieve a competitive advantage in the market. Firstly, "Organisations are assumed to operate in dynamic and uncertain environments where they need to adapt and change to stay competitive" (Teece et al., 1997, p. 516). Secondly, it is assumed that a firm's resource base is a crucial determinant of its competitive advantage, and this resource base is no longer limited to tangible assets such as buildings and furniture but has expanded to include intangible assets such as technical know-how, software, and digital technologies that are powerful tools for

organization's dynamic capabilities. Thirdly, it is assumed that a firm's capabilities can be developed and improved over time, and "it is on this basis that the need for organizational innovation that requires timely response and adaptability is coupled with strategic management to redeploy resources within the organization" (Teece et al., 1997, p. 516).

DC theory is built on these assumptions and provides a framework for organizations to reconfigure, reorganize, and review their internal and external resources to fit the dynamic business environment (Sunder et al., 2021, p. 4). It can be applied to organisations (Santoro et al., 2021). The study by Karimi & Rivard (2020) suggests that unlike the Resource-Based View (RBV), which focuses on internal resources and a relatively stable environment, dynamic capabilities consider both internal and external capabilities of an organization with the main aim of positioning or gaining a competitive advantage in the rapidly changing market (p. 2). To this end the theory has been adopted in different sectors and with different applications, particularly in business, it was found to be necessary for firms to produce products that are fit for purpose given the time (Teece, 2018, p. 43).

DC is framed around three dimensions: sensing, seizing, and transformation. The triangled dimensions are based on the idea that firms need to be able to sense changes in the environment, particularly changes that will require changes in their models, seize opportunities, and transform their capabilities to take advantage of these opportunities (Karimi & Rivard, 2020, p. 3).

2.2.1 Sensing

The sensing dimension refers to the ability to scan the business environment for changes and opportunities that may arise. Wilhelm et al., (2022) define sensing as the process to scan, identify and develop business market opportunities. Sensing advocates for organisations to be on the lookout for opportunities and threats by utilising an organisation's internal and external resources (Karimi & Rivard, 2020, p. 4). Oliver et al., (2019) contextualise sensing as the "ability to detect and understand signals from the environment, including emerging customer needs, competitor actions, changes in technology, and shifts in the regulatory environment, among others" (p. 4). In essence, sensing involves the organization's ability to scan, monitor, and interpret information about its external environment to identify opportunities and threats and to adjust its strategy and operations accordingly (Teece, 2018, p. 44). Indeed, by sensing environmental changes, organizations can anticipate and respond to emerging

opportunities and threats, a critical component of the DC framework (Karimi & Rivard, 2020, p. 5).

Hock-Doepgen et al., (2021) posit various ways to enhance and develop organisation capabilities to scan the environment, including research, being part of customer platforms and through developmental partners (p. 520). Sensing enables the organisation to have a broader view of changes in the market (Santoro et al., 2021). Sensing "capabilities are important for every organisation as it ensures no missed opportunities of any kind, including related to trends in innovation or knowledge management and enhancement of a company" (Karimi & Rivard, 2020, p. 4).

Sensing is the first dimension yet an essential component of DC. For example, sensing will help the organisation to identify opportunities and threats related to knowledge acquisition, creation, storage and, most notably, development of the same, as highlighted by (Cui et al., 2020, p. 219). Further, the dimension is vital in scanning possible areas of improvement in an organisation's business architecture; without sensing, it will be difficult for an organisation to pick outdated processes in business systems (Latifi et al., 2021, p. 3).

Sensing may involve researching the business landscape and engaging with stakeholders, including customers and other relevant parties. By leveraging these strategies, organizations can gain a broader view of changes in the market and identify opportunities for innovation and growth. Therefore, organizations must invest in and enhance their sensing capabilities to achieve sustained success in dynamic and uncertain environments.

2.2.2 Seizing

The second dimension involved is seizing or capturing to build a dynamic capability for knowledge management and business model. Heaton et al., (2023) defined seizing as the organisation's ability to realign its resources and capture an existing market opportunity. Wilhelm et al., (2022) conceptualized it as the ability to address those opportunities or threats; hence involves taking action to capture opportunities that arise (Teece, 2018). Seizing is a process of ensuring that the organisation has resources that will assist it in taking an opportunity rapidly as it appears (Karimi & Rivard, 2020). It involves developing new products or services and entering new markets simply because there is a need for demand for them (Oliver et al., 2019).

The importance of seizing capabilities cannot be overemphasized in today's knowledge-intensive organizations, where most of the organization's capabilities are in technical know-how and modern technologies Kianto et al., (2019). Firms must seize capabilities to address the opportunities and threats they sense. Seizing requires that when an opportunity is identified, the firm should reconfigure and reintegrate its resources to capture and turn the opportunities into desired organisational output (Teece, 2018). Sensing capabilities are advantageous for organizations as it enables them to respond timely and react quickly to changes which may go unnoticed by external stakeholders. In knowledge management, sensing is imperative as it ensures that all opportunities for building knowledge are fully captured and turned into tangible results, particularly for incremental innovation in business processes and models (Tallman et al., 2018).

2.2.3 Transforming

The first two dimensions of DC, sensing and seizing, are focused on identifying and capturing opportunities in the market. Organizations require robust sensing and seizing capabilities to execute effective knowledge management through acquisition and collaboration. However, transformation is also a critical component of DC, enabling organizations to adapt to changing environments and capitalize on opportunities for growth and innovation(Karimi & Rivard, 2020).

Transformation involves three sub-dimensions: redesigning, navigating, and improving the organization's structure(Teece et al., 1997). Redesigning is the process of rethinking and revamping the organization's core processes, strategies, and practices to better align with the market's evolving needs. Navigating involves charting a course through uncharted waters and navigating the uncertainties that arise during periods of change. Improving the organization's structure involves optimizing how the organization's resources are allocated, managed, and deployed to support the organization's strategic objectives (Karimi & Rivard, 2020; Teece et al., 1997).

Transformative capabilities are essential for organizations because they allow them to venture into uncharted territories and explore strategic changes. By adapting to changing market conditions and taking calculated risks, organizations can create new opportunities for growth and competitive advantage. According to (Teece, 2018) , transformational capabilities allow organizations to "change their modus operandi, organizational architecture, and culture to create and capture value in new ways" (p. 45). The transformation dimension of dynamic capability is crucial for organizations to

manage their knowledge and innovate their business models effectively. By redesigning the sub-dimension of transformation, "organizations can restructure their knowledge management processes to better align with their business goals and improve overall efficiency" (Zhang et al., 2022, p. 602).

Furthermore, transformation also enables organizations to navigate through new challenges and opportunities, such as market changes or technological advances, that can impact their knowledge management strategies and business models. By improving their organizational structure through the improving sub-dimension of transformation, organizations can create a more agile and responsive environment better equipped to adapt to these changes (Lane, Ganguli, et al., 2021). Transformation can enable organizations to create entirely new value propositions and business models through the redesigning sub-dimension of transformation. This can "involve the development of new products, services, or business processes that can revolutionize how the organization operates and serves its customers" (Teece, 2018, p. 44).

2.3 Dynamic Capability Applications

The dynamic nature of the business environment has led to an increased focus on frameworks that provide a competitive advantage. Dynamic capabilities (DC) "theory offers insights into developing different types of capabilities" (Chen et al., 2022b, p. 1139). The theory highlights the importance of a firm's internal and external resources in developing and deploying dynamic capabilities (Teece, 2018). Internal resources, such as knowledge, skills, and routines, are critical for developing new capabilities (Teece, 2018), while external resources, such as alliances, partnerships, and networks, are essential for accessing and integrating new knowledge and technologies from outside the firm (Oliver et al., 2019).

Dynamic Capabilities theory is a prominent theory in strategic management that has gained widespread attention in recent years (Heaton et al., 2023). The core premise of DC theory is that firms must be able to sense, seize, and transform resources to adapt to the changing environment (Karimi & Rivard, 2020). The application of DC in business has been on the rise due to the growth in technology (Heaton et al., 2023); however, the relevance of DC theory became apparent in boardrooms worldwide following the outbreak of the global pandemic in 2019 (Lim & Morris, 2023). This theory has gained momentum and has been adopted in different sectors and with different

applications (Karimi & Rivard, 2020).

In the context of knowledge management and business model innovation, DC theory offers valuable insights into how firms can sense and seize opportunities that are associated with the strategic partnership or collaboration to enhance their knowledge-related capabilities to change and transform business models (Haftor & Costa, 2023). The theory is a powerful theoretical approach to understand how organisation builds capabilities by leveraging on the interactions and partnerships with various stakeholders. The relevance of DC is in essences building capabilities that are dynamic and able to absorb current and future business shocks. Knowledge management is an essential component of DC theory, as it emphasizes the importance of both internal and external knowledge resources in developing and deploying dynamic capabilities (Sunder M et al., 2021). By enhancing knowledge-related resources, firms can improve their ability to sense and seize new opportunities (Karimi & Rivard, 2020) and transform their business models to adapt to changing market conditions (Sjödin et al., 2020).

Several studies have applied DC theory to knowledge management and business model innovation. For example (Santoro et al., 2021) used DC theory to explore how firms can enhance their knowledge management capabilities to become ambidextrous in innovation. Similarly, Clauss et al., (2021) used DC theory to investigate how different firms' capabilities influence business models to achieve competitive advantage. On the other hand though, Hock-Doepgen et al., (2021), in assessing the relevance of knowledge management to business model invocation in private sectors, did not use DC theory, which makes this study interesting as it extends the contribution of knowledge management to business model innovation in volatile and it time of uncertainty. Hence, this theory provides a comprehensive framework to explore and sensing mechanisms for the knowledge streams arising from network collaborations and their contribution to business model innovation and extend the dynamism of the capabilities built from collaborations.

2.4 Business Model Innovation (BMI)

The 21st century has proven to be a pivotal moment in human history, marked by unprecedented global challenges. Climate change, public health crises, and rapid technological advancement are major issues that society must confront in this era (Lim & Morris, 2023). New ways of living and operating have emerged in response to these phenomena, including the Fourth Industrial Revolution (4IR), the adoption of clean

energy, and the growth of knowledge-based economies. Organizations must pivot their policies and mindsets to adapt to these changes, with knowledge becoming a vital driver of innovation and adaptation. Indeed, knowledge has emerged as the cornerstone of this century, prompting industries and academia to place a renewed emphasis on the development and management of the same.

A Business Model is the backbone of every business and organisation regardless of business activities (Tallman et al., 2018) because it provides an ecosystem for organizations to interact with consumers and vendors (Agarwal et al., 2021). According to Teece business model "describe an architecture for how a firm creates and delivers value to customers and the mechanisms employed to capture a share of that value" (Teece, 2018, p. 40). Simply, it refers to how a firm delivers its products and services to consumers (Sjödín et al., 2020).

Similarly, Latifi et al. (2021) and Lim & Morris (2023) explained a business model as an operating system where technology and creativity are integrated for better value creation. Scholars such as Clauss et al., (2021) and Teece (2018) agreed that organisations may create value through three dimensions, namely: "value proposition, value creation, and value capture." (Sjödín et al., 2020) emphasised that a firm may optimise value capture and creation when resources and capabilities are appropriately allocated.

Furthermore, The model may be enhanced through collaboration and well proper allocation of resources. Teece (2018) stated that an organisation's capabilities include financial, technological, and intellectual resources. Lim & Morris (2023) emphasised that in a digital era, intellectual capital had become a powerful capability of every firm, including technical know-how and intellectual property as knowledge management components. Given that change is the only constant element, organisations must continue improving their business model to be fit for purpose to consumers (Clauss et al., 2021). Hock-doepgen et al., (2021) established that technical know-how is a unique part of knowledge management and helps organisations to modify its business model.

For the past years, business model innovation has grown in importance Engwall et al. (2021) is necessitated by the growth in technologies Clauss et al. (2021) and other scholars classified it as a product of competition (Ferreras-Méndez et al., 2021). Teece (2018) described a business model innovation as an adjustment to any organisation's business model to fit the environment's evolvement. Latifi et al. (2021) suggest that the

business model innovation is peculiar and relevant for profit-driven organisations, a position that Ferreras-Méndez et al. (2021) supported, citing new products development, which is not often a case in non-profit making corporations.

Agarwal et al. (2021) are of different view as they believe that the business model innovation cuts across all sectors of the economy. They explored the conditions for the public sector innovation model in India. Further, they indicated the importance of business model innovation to the sector regarding the value creation for citizen, industry and government. They concluded that the business innovation model is flued by digital technology, and the organisation's digital capabilities have been a catalyst of change. In their study, they viewed digital capabilities in the context of a resources base view and now reference in no way digital capabilities viewed as a dimension of knowledge management.

Trotter & Brophy (2022), in support of Agarwal and others, took an approach of technology and ambiguity in markets as catalysts for business innovation models and disregarded favouring any business sector. Despite the two-scholars position on business model innovation, researchers remain reluctant to probe further the relevance and implementation of the business innovation models in public sectors (Agarwal et al., 2021). Klofsten et al. (2021) conducted a study focusing on the Small and Medium Enterprises sector, which is into profit-making. Through this study, it becomes clear how these knowledge streams resulting from network collaborations contribute to business model innovation in the public sector.

2.5 Knowledge Management

The world has evolved, and intangible assets in the form of intellectual property rights are becoming essential to businesses daily. It is no longer news that the economic war will no longer be fought on a battlefield but in laboratories and research institutions of intellectual houses (Di et al., 2021). Knowledge becomes a powerful resource of production and a modern tool for competition Teece (2018) since they operate in an uncertain and volatile environment Baran & Woznyj, (2021), where firms are required to innovate and reintegrate their services for better performance and value creation (Sjödín et al., 2020). In essence, knowledge is an individual's know-how within their intellectual capacity. Knowledge can be developed, natured and enhanced (Cui et al., 2020). Knowledge management is managing knowledge by utilising it to develop new inventions and processes (Hock-Doepgen et al., 2021; Leoni et al., 2022).

In a rapidly changing business environment, "acquiring and developing knowledge has become a crucial resource for organizations to address the challenges they face" (Piñeiro-chousa et al., 2020, p. 476). As business landscapes evolve, organizations need dynamic resources to stay competitive. This is where knowledge management as a dynamic resource of organisation comes in by providing a better vehicle for competition and adaptability in response to environmental changes (Chen et al., 2022a) and by utilizing knowledge management practices, organizations can effectively leverage their knowledge resources and stay ahead of the competition (Hock-doeppen et al., 2021). Since these findings are for the private sector, it will be essential to know the key factors that affect the success of knowledge management in the public sector for business innovation.

Although their study establishment the link between knowledge management and business model innovation, it did not tie in the DC framework (Tallman et al., 2018), and their study was more theoretical, and it can be argued that the finding is still to be proven through an empirical study (Di et al., 2021).

Böttcher et al. (2022) confirmed that organisations that manage their knowledge well as a resource leapfrog in digitalisation and serve their consumer better, which is a strategic ambition of most organisations. Their study has primarily focused on enterprises in the private sector, which tend to be a more product-based approach to innovation. As such, it may not be appropriate to generalize these findings to the public sector or service-based organizations, which face unique challenges such as providing public welfare services in a competitive, regulated environment. After this study, it will become apparent how knowledge management contributes to business model innovation in the public sector.

An organisation may enhance knowledge management by "combining internal and external capabilities, improving the KM process to realize opportunities or threats, seize opportunities and reconfigure resources" (Zhang et al., 2022). Although theoretical evidence suggests that Knowledge management is an enabler of the business innovation model, there is no yet empirical evidence on how Knowledge Management as an organisation's capabilities may be enhanced and influence the business model innovation model's public sector (Chen & Huan, 2022; Leo, 2020).

Similarly, Hock-Doepgen et al. (2021) established the relationship between knowledge

management and business model innovation by looking at the internal and external capabilities of an organisation; however, their study was limited to Small and Medium Enterprises (SMEs) that are seen as risk takers. They further agreed with Chen & Huan, (2022) and (Karimi & Rivard, 2020) that, knowledge management has several dimensions that may influence business model innovation. Although their studies establish knowledge management as an enabler of business model innovation, they indicated that a normal circumstance organisation engaged in network collaborations that serve as a knowledge stream of an organisation; however, how this knowledge stimulates innovation for business model is unknown. Hock-Doepgen et al., (2021), suggest a need to analyse the knowledge arising from network collaboration and how it stimulates business model innovation, particularly in the broader context of services organisations and public sectors (Agarwal et al., 2021).

This gap in both industries and literature justifies the interest to contextualise the relationship of knowledge management by exploring collaboration and networks as a dimension of knowledge management and its impact on organisation business model innovation, as several works of literature neglect (Hock-Doepgen et al., 2021). Therefore, this study attempted to answer how the knowledge stream arising from network collaborations contributes to business model innovation in public sectors.

In their study, Chen & Huan (2022) suggest that knowledge may be managed around the dimensions of "knowledge creation, acquisition, storage, application and sharing. " Knowledge sharing is core to this study and will be contextualised in different sections in-depth. The next section deals with the dimension of knowledge in detail.

2.5.1 Knowledge creation

Knowledge creation is another fundamental dimension of knowledge management that is relevant to this study. It refers to the ability of an organisation to create new knowledge in the organisation through different activities or activities that may involve an exchange of information or training (Hock-doepgen et al., 2021; Leo, 2020; Pepple et al., 2022). According to Fakhar Manesh et al., (2021, p. 293) it is the process of creating new knowledge through research, development, experimentation, and innovation; it involves combining existing information and insights to create new perspectives and ideas. In the fourth industrial revolution, new knowledge suddenly became outdated at a galloping pace, which requires organisations to deploy mechanisms to ensure that it creates or seize opportunities to gain new knowledge and

technical know-how (Chen et al., 2022a, p. 1141) and rationale behind knowledge creation will only be realised if entities are able to store and retrieve knowledge seamlessly (Leo, 2020, p. 107). Literature indicated a close link between networking and knowledge creation, which is at the heart of this study.

Kang and Lee (2022) explored how innovating firms manage knowledge leakage. The foundation of the study was to test the strength of firms in managing knowledge. In their study, they identify several strategies to be taken to safeguard the created knowledge for future use. Further, they emphasised that it is not enough for organisations to only create knowledge internally but is essential to understand other available avenues for knowledge creation. In their study, it appears that an organisation that does not create knowledge is planning to fail because, eventually, it will run out of knowledge capabilities. Their study was mainly focused on internal mechanisms of knowledge creation; hence, this study was outward-looking on avenues and possibilities of creating knowledge through networking and collaboration, particularly its management thereof to influence business model.

Hock-Doepgen et al. (2021) investigated knowledge management as a capability for SMEs. They pointed out that SMEs are cautious with the way they gain and create knowledge. Often, they prioritise knowledge creation in their business strategy and outperform others in respect of provided relevance and seamless services. Moreover, they highlight that SMEs ensure that employees are involved in dialogues, discussions and, to an extent, sandbox initiatives that ensure discoveries and information that is characterised as knowledge to the organisation. However, their study was as well inward looking similar to that of Kang & Lee (2022); hence, a gap still exists on whether organisations create knowledge during collaboration and networking, and further how it is managed is paramount to this study.

2.5.2 Knowledge acquisition

Knowledge acquisition is yet another dimension of knowledge management that is vital for this study. In literature, knowledge acquisition is defined as the process or aspect through which organisations or individuals acquire knowledge. The acquisition may be through collaboration benchmarking. Hock-Doepgen et al. (2021) defined collaboration as a practice of interaction between an organisation with an individual, the individual with individuals, business to business, customer to business and business to suppliers. A perfect example of collaboration that is related to business and business is when

SMEs explore open innovation and cross-licensing of technology, thereby improving their organisational knowledge capabilities and enhancing service delivery.

Pepple et al. (2022) indicated that the public sector commonly practices benchmarking exercises, which include visiting other offices to learn more about their best practices. In contrast (Hock-doeppen et al., 2021), in their study concluded that SMEs that are in the private sector mostly acquire their knowledge internally by leveraging internal opportunity recognition, creativity, and agility, and, importantly, they encourage a culture that fosters organizational experimentation and learning. This predicament makes it evident that different organisations in various sectors strategies differently in acquiring knowledge.

Knowledge acquisition can be from different sources or practices and is a vital component of knowledge management. All the studies could not investigate how knowledge is obtained through networking and collaboration of the public sector, which makes this study relevant in aspiration to fill that gap.

2.5.3 Knowledge storage

Knowledge storage involves organising and storing knowledge in a structured manner to make it easily accessible and retrievable. It includes the use of various knowledge management systems and technologies to store, organize, and manage knowledge assets (Tsai et al., 2022, p. 433). Similarly, Leo (2020, p. 107) indicated that knowledge storage includes record, codification and retention of knowledge in an organisation for future use. The essential of this dimension is that after the knowledge is acquired, it then needs to be preserved and used to matter. Furthermore, it implied that the organisation has a repository of technical know-how that is readily available whenever needed. This study adopted to use the phrase “knowledge storage” to refer to the process record, storing, the input, and contributions that are seen as knowledge to the organisation.

Knowledge storage is a critical aspect of knowledge management because it ensures that information that is considered knowledge by the organisation is systematically stored. Ferraris et al. (2021, p. 712) suggested that for information to be a resource or capability of an organisation before it is used, it depends on the manners that an organisation adopts to store and manage such knowledge. With the same view as Ferraris et al. (2021) is Pepple et al. (2022, p. 510), who reasoned that knowledge that

is acquired and not stored, recorded or preserved is nothing to an organisation because the significance of knowledge and information is embedded in its accessible whenever is required and a given time.

There are sundry methods and mechanisms available to store knowledge in an organisation Chen et al., (2022b, p. 1140), starting with the knowledge that is known or in by an individual, to wider platforms such as in electronic format, reports and printed documents Tsai et al., (2022, p. 433); however this methods may differ from organisation to organisation depending on its types, structure and market (Pepple et al., (2022, p. 510). These wide range of mechanisms are vital for organisations to have as they ensure a fashionable manner to store knowledge, and the method that organisations choose should promote the accessibility and sustainability of knowledge storage. Chen et al. (2022b, p. 1140) mentioned that in a digital era, platforms to store knowledge are a lot but not limited to flash compact disks, external drives, physical files, and office libraries. The ability of an organisation to store knowledge is directly proportional to its ability to acquire knowledge; this is because stored knowledge can further be enhanced and developed into new knowledge and technical capabilities (Chen & Huan, 2022, p. 520).

Tsai et al., 2022, p. (434) found that SMEs have defined and liable mechanisms of storing and preserving, which make them to leapfrog in the market and ruler makers. Ferraris et al. (2021, p. 712) agreed with Tsai et al. by stressing that SMEs do have to be arranged in a fashion manner that grants easy access and retrievals; to this end, the status of the public sector when it comes to knowledge storage particular the one from networking and collaboration is not widely explored and it important cannot be overstressed.

Hock-Doepgen et al. (2021, p. 693) emphasised the importance of knowledge storage as a fundamental aspect of an organisation. They reasoned that the presence of a knowledge storage mechanism designs organisational knowledge management, which empowers organisations to change and adjust their business model. Understanding the ability of knowledge management to influence the organisations business model is fundamental to this study.

2.5.4 Knowledge sharing

Knowledge sharing is the transmission of information and knowledge between individuals in an organisation (Tsai et al., 2022, p. 434). In the context of the study,

knowledge sharing is holistically interrogated in how knowledge, particularly from networking and collaboration, is disseminated to the concerned parties (Pepple et al., 2022, p. 512). This dimension of knowledge management is systematically interdependent. Knowledge sharing focuses on the ability of organisations to make information available and known in the organisation after acquisition (Lane et al., 2021, p. 1217). The understanding is that organisations share information in different methods, formal or informal basis. The most used method in the private sector is through a meeting or digital platforms such as Google Drive, shared folders and email Hock-doeppen et al., (2021, p. 695). However, the fundamental question is whether they are sufficient or not and if they are applicable both in the private and public sectors.

Di et al. (2021, p. 221) suggested that when information is shared, its purpose becomes realised such that it influences organisation capabilities since individuals are informed and put in a better position to innovate and use the knowledge in a different area. A similar position was maintained by Chen et al. (2022b, p. 1140) in their study titled “Building data driven dynamic capabilities to arrest knowledge hiding: a knowledge management perspective” concluded that knowledge sharing is a catalyst for innovation in organisations; the ponder on the influence of shared data that drives organisation innovation by utilising knowledge. Knowledge sharing is a vital aspect of knowledge management and was properly used in SMEs to influence change in the business model. However, if this could be the same in the public sector, it is an aspect that this study probed.

2.5.5 Knowledge Application

Knowledge application is the ability of an organisation to utilise and put what is known into practice to respond to business challenges and customer needs. In this study, the term knowledge application is adopted for consistency. Knowledge application in any organisation describes the appetite of an organisation to effectively utilise the knowledge that is at its disposal to adjust and change the way it conducts business and responds to market demands (Chen & Huan, 2022).

Di et al. (2021) concluded that organisations that prioritise and effectively use intangible capabilities such as knowledge tend to establish themselves as market leaders because they shape the market by introducing new things. Building on this foundation, Lane et al. (2021, p. 1218) argued that knowledge application goes beyond

just a mere utilisation to tangible outcomes. Therefore, it is important to ensure that the acquisition of knowledge in the organisation is measured against the application of it.

Hock-Doepgen et al. (2021) emphasised that it is vital for an organisation to sense and seize knowledge acquisition that may exist during knowledge application. Their study focuses on the private sector; hence, the application of their funding remains open for discussion. Understanding how knowledge is acquired through networking and collaboration is applied to influence organisational business operations, particularly in the public sector, is of paramount importance to this study.

2.6 Network Collaboration

The streams of knowledge flow are vital for organisations, and there are many ways in which organisations acquire knowledge, such as through knowledge sharing. Knowledge sharing refers to exchanging knowledge and information among individuals and groups within an organization, sector or market Chen & Huan (2022). In context, the knowledge stream from collaboration and networks is another dimension of knowledge management that is less explored, and it "refers to the process of knowledge exchange and creation that occurs when individuals or organizations engage in collaborative activities or networked relationships" (Hock-doepgen et al., 2021, p. 695). They further emphasized that "Firms often engage in network collaborations, providing them access to relevant knowledge coming from outside the firm" (Hock-doepgen et al., 2021, p. 695). Tsai et al. (2022, p. 435) defined a stakeholder as individuals, groups, or entities with a vested interest in a specific project or organisation. They further indicated that organisation deals with a myriad of stakeholders, such as customers, suppliers, investors, shareholders, and communities. Through these interactions, individuals and organizations can access knowledge and expertise that they may not have possessed on their own. They can combine their knowledge and expertise with that of others to create new knowledge and most probably encourage innovation toward business models (Zhang et al., 2022).

Collaboration and network knowledge stream can take many forms, such as sharing best practices, conducting joint research, co-creating new products or services, or exchanging tacit knowledge through personal relationships (Ferraris et al., 2021). Effective management of knowledge streams from collaboration and networks can bring significant benefits for organizations, including increased innovation, improved problem-solving capabilities, and enhanced competitiveness in the marketplace.

Therefore, this study suggested the fundamental mechanisms and channels through which knowledge streams arise from network collaborations in the public sector.

2.7 Knowledge Management and Business Model Innovation.

There has been a significant series of studies on knowledge management and business innovation, particularly in private organisations (Ferrerias-Méndez et al., 2021; Klofsten et al., 2021; Latifi et al., 2021). A few scholars established knowledge management's role in business model innovation (Leoni et al., 2022; Zhang et al., 2022). Chirumalla (2021) reported that business model innovation depends on the organisation's capabilities to innovate; however, he adopted a quantitative research design; hence one may wish to confirm finding through a qualitative research design. Teece (2018) linked knowledge management to dynamic capabilities, which remain relevant given the changes in the environment and ecosystem. In the study, Snihur & Bocken (2022) establish the importance of business innovation to the organisation, society, and the plan; They indicated the interconnectedness of innovation and business innovation model; however, they highlighted a need for future study on the business innovation model and dynamic knowledge. Closely, Latifi et al. (2021) confirmed that BMI could afford the organisation a competitive advantage.

Although there is enough evidence of the importance of business model innovation to the private sector (Leo, 2020), its essence to the public sector for service delivery remains under research (Agarwal et al., 2021). According to Lane et al. (2021), an organisation's level of innovation determines the competitive business model. Their study relies on secondary data, which can hardly be relied on. A series of studies have been conducted on the roles of knowledge management in business model innovation for the private sector; hence, it is not contentious that knowledge management accelerates business innovation as an architecture of business operation (Hock-Doepgen et al., 2021), but if whether this finding applies to the public sector, this is yet to be explored. Furthermore, most existing knowledge management research has focused on private-sector operations in developed countries, mainly Europe and Asia (Hock-Doepgen et al., 2021)(Chen & Huan, 2022).

While this body of research has explored various dimensions of knowledge management, such as knowledge acquisition, application, and creation, there has been limited investigation into the knowledge that results from network collaboration, which provides organizations with platforms to acquire knowledge from sources outside their

immediate environment (Hock-Doepgen et al., 2021, p. 695). The contribution of such collaboration to the business innovation model remains unexplored, representing a significant gap in the literature. Addressing this oversight, this study seeks to understand how the knowledge stream from network collaborations contributes to business model innovation in the public sector.

2.8 Conclusion of the Literature Review

The literature review presented in this chapter canvased an understanding of how knowledge from networks collaboration stream is managed and how it contributes to business model innovation in Namibia SOEs through an adynamic capabilities theory lens. Traditionally, SOEs engaged in collaborations to gather tangible assets, but the opportunity to gain intangible capabilities through this partnership and associations was thoroughly reviewed and identified. Often, during collaboration, these organizations fail to sense and seize the opportunities related to intangible capabilities.

The question emanating from this review is whether there is knowledge flow from collaboration and how organisations manage or leverage it to innovate and improve the business model. While enquiring into the existing body of knowledge urges that knowledge management can not only contribute to business innovation in private sectors. It becomes apparent that much conviction has been made on how knowledge influences business model innovation. However, empirical evidence is required on how collaboration as a knowledge management dimension brings in knowledge in the public sector. The next chapter presents the research questions in alignment with the literature review.

CHAPTER 3: RESEARCH QUESTIONS

3.1 Introduction

In qualitative research, the researcher must formulate a central research question and support it with sub-questions (Small, 2021). The main research question guides the researcher by providing theoretical direction and purpose to the study (Sowicz et al., 2019). The main question is then linked to the study phenomena by the sub-questions. This study's objective was to explore the flow of knowledge from network collaboration as a dimension of knowledge management and its contribution to business model innovation.

This chapter presents the questions used in this study. Building upon the literature review in chapter two of this study, a main question supported by a two-sub-question was developed to guide the research. The research is exploratory, and to fill the gap in literature and insights on the research problem, it seeks to answer the following questions:

3.2 Research Question 1

How does the knowledge arising from network collaborations contribute to business model innovation?

This question aimed to understand whether there is knowledge that flows from networking or collaboration and how this knowledge contributes to the enhancement of process or business model innovation (Hock-doepgen et al., 2021, p. 695).

To better understand the research phenomena, the following sub-questions were developed to follow the main question.

3.3 Sub-Question 1

What are the key mechanisms and channels through which knowledge streams arise from network collaborations in the public sector?(Hock-doepgen et al., 2021, p. 695)

This question aimed to delve into mechanisms and pathways that facilitate the flow of knowledge from network collaborations within public sectors. It assists with understanding the methods of generating and sharing information among public sectors.

3.4 Sub-Question 2

How do these knowledge streams from network collaborations contribute to business model innovation in the public sector? (Hock-doeppen et al., 2021, p. 695)

This question aimed to examine how knowledge flows from network collaboration play an important role in driving changes in business models within the public sector. This question further aimed to shed light on the dynamics and mechanisms underlie the transformation of the public sector. The researcher aims to uncover real examples where knowledge derived from collaboration networks directly informs the reshaping and redesign of business models.

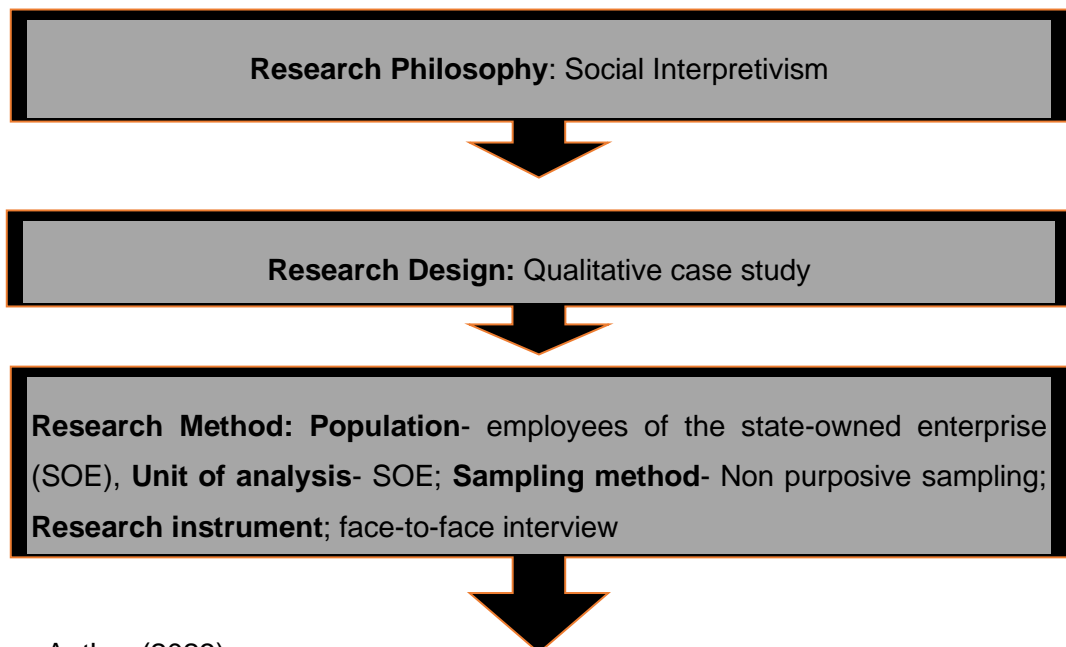
3.5 Conclusion

In conclusion, these are the primary and sub-questions of this research, designed to understand the flow of knowledge via network collaborations and their contribution to business model innovation within public sectors. This endeavour seeks to unravel the types of knowledge and different mechanisms that facilitate knowledge flow.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The sequence of this study is thus based on the outline of the research problem as presented in Chapter One. The researcher used interpretivism as a philosophy to explore the relationship between knowledge management arising from network collaborations and business model innovation. The scope of the study was to explore the flow of knowledge from network collaboration as a dimension of knowledge management, and its contribution to business model innovation has been dealt with in the literature review in Chapter 2. In chapter three, qualitative research questions were developed to understand how knowledge arising from network collaboration as organisation capabilities contributes to innovation in Namibia's public enterprise business model. In line with the research structure thus far, this chapter discusses the research approaches or techniques employed in this study. The approach to research methodology is to discuss the general aims and objectives of the study by involving aspects of analytical context that discuss the philosophies underlying this study, research methodology, population, sampling, the unit of analysis, research instrument, data processing, data analysis, research limitations and reliability and validity.



Source: Author (2023)

Figure 2 : The research process.

4.2 Research Philosophy

Research philosophy relates to assumptions, knowledge, and the nature of the study. It is a vital component of research because it helps readers to understand the researcher's assumption (Bell et al., 2019), and in essence, research philosophy serves three functions in a research study, namely: demystifying, informing and method-facilitation (Easterby-Smith et al., 2021). The researcher considered first the philosophical ontology of the study. The ontology of a study refers to the researcher's beliefs and assumptions about the nature of reality and how it can be understood (Bell et al., 2019). According to Bell et al. (2019), researchers can adopt various ontological positions, such as realism, positivism, interpretivism, constructivism, and pragmatism.

Interpretivism acknowledges that human beings and individuals construct their subjective realities about a variable through their perceptions, experiences, and social interactions. On the other hand, constructivism emphasizes the role of the researcher in co-constructing knowledge with the participants, recognizing that both the researcher and participants bring their perspectives and biases to the research process (Bell et al., 2019). Since this study is about understanding the relation between two constructs, the ontology of the study was interpretivism.

The next branch of philosophy the researcher considered was the epistemology of research because it significantly influences research. Epistemology is a branch of philosophy that deals with knowledge's nature, scope, and limits. In essence, it involves considering the nature of knowledge and understanding the methods and processes through which knowledge can be generated and evaluated. The researcher adopted interpretivism positivism as an epistemology for the research because the study intended to explore social reality (Easterby-Smith et al., 2021) and was informed by the interpretivism ontology described above. Further, the data was collected through face-to-face interviews as a research instrument to support the research philosophy.

4.3 Research Methodology

Research methodology systematically collects data using different techniques to conclude an inquiry as a research study. Goundar (2019) unpacked the definition by characterizing it as a plan for collecting, measuring, and analysing data to answer possible research questions. Bell et al. (2019), on the other hand, provided a practical definition of research methodology that "refers to the selection of a plan of action that is

to be followed in gathering and analysing data" (p. 38). The research methodology is essential because it contains data collection procedures and specifies the sampling design (Aspers & Corte, 2019). From all the definitions above, research methodology is an outline or adopted framework by the researcher that enables him to collect, analyse, and interpret the study's data.

The overarching purpose of the research study was theory based, building on the theory and study of Hock-doepgen et al., (2021). The researcher adopted the qualitative methodology to have a systematic approach to the study. According to Bell et al. (2019), a qualitative methodology is a research approach that aims to understand and interpret social phenomena through non-numerical data through empirical study. The qualitative methodology generates insights, theories, and interpretations, contributing to a deeper understanding of the research phenomenon (Adner et al., 2019). The method is chosen because it allows the researcher to explore the topic in-depth, even capturing rich and detailed information on the research question (Bell et al., 2019). Additionally, since qualitative allows participant's voices, it is reached in data collection as the researcher had a chance to connect with participants.

4.4 The population of the study

Bell et al. (2019) defined a study population as a whole category of individuals or a collection of items and activities the researcher needs to study. The study's target population will be all Namibian Public Enterprises operating or headquartered in Windhoek. Public Enterprise is a body formed in terms of the Public Enterprise Act (PEA) (Act 1/2019) with the primary purpose of carrying out activities on behalf of the state (Limbo, 2019). Currently, there are 71 public enterprises in Namibia. The selection of public enterprise is another consideration of a sector not considered by Hock-Doepgen et al. (2021).

4.5 Unity of analysis

A unit of analysis in a research study refers to a set or single element representing a sample subject (Bell et al., 2019). Given this study's research question, the analysis unit was junior managers, senior managers, and executives from Namibia state-owned enterprises, and the level of analysis was the organisation.

4.6 Sampling method and size

Sampling refers to selecting a subset of individuals or units from a larger population to participate in a research study (Bell et al., 2019). Since this qualitative study involved around 71 state-owned enterprises, the researcher will adopt the non-probability purposive sampling method. Bell et al., (2019) define purposive sampling as a method that deliberately selects participants with specific characteristics or relevant knowledge and experiences related to the research topic. Out of 71 state-owned enterprises, the researcher selected one for the study. The organisation was selected based on its potential to offer answers to the research questions given its involvement in networking and collaboration. Subsequently, fourteen individuals from the selected organization were interviewed, representing different departments, including business operations, governance, information and technology stakeholder management, and communication. The individuals were purposively chosen due to their seniority in the organization, their years of experience, qualifications, and positions within the organization, which were believed to provide a comprehensive understanding of the subject matter. To avoid biases in sampling, the research utilised secondary data such as annual reports and websites. This approach was to ensure that the institution is selected based on its likelihood of better understanding knowledge management and business model innovation.

4.7 Research Instrument

According to Aspers & Corte, (2019), one of the notable characteristics of qualitative study is the data collection instrument; the researcher serves as the primary data collector. A research question questionnaire was used to collect data and was comprised of two sections and is attached as Appendix 3 of this study. The first section focused on demographic data to ensure that the information is received from competent people and to ensure inclusive representation of respondents. The second section comprised of open-ended questions that answered the research question. Given that the study took place in a post-COVID-19 context, it is essential to consider the feasibility and practicality of data collection techniques. The data was gathered through face-to-face meetings with participants. The used interview guide is attached as Appendix A3.

Therefore, employing a combination of data collection methods allows flexibility in accommodating the preferences and circumstances of participants, ensuring their

comfort and willingness to engage in the research process (Adner et al., 2019). Additional secondary data was collected from sources such as websites and annual integrated reports provided by the Ministry of Public Enterprise. This combination of primary and secondary data sources enhanced the comprehensiveness and validity of the study's results.

4.8 Pilot Interview

A pilot study was conducted to ensure the reliability of the research instrument and obtain accurate results. The pilot study aims to test the clarity and effectiveness of the interview questions. Interviews were conducted with an organization with a similar setting to the target population to ensure the questions are well understood and yield meaningful responses. After the pilot study, interview schedule was adjusted accordingly to ensure clarity and flow of question.

4.9 Data Gathering Process.

The data-gathering process is where the research considers the type of data needed to answer the research question by selecting an appropriate procedure to collect data. According to Gear et al., (2018), some procedures commonly used in qualitative study are literature review, observation and interviews. During the interview only primary data collected no secondary data collected from participants. The individual interview is the feasible procedure to collect data for this research and is a method where the research interview individuals by posing probes and follow-up questions. For this study, the interviews were held face-to face with each participant. The researcher went to each participants' offices upon approval and acceptance of interview. The semi-structured interviews allowed participants to provide their opinions and insights on the phenomena. This approach also allowed the researcher to ask follow-up questions to delve deeper into specific areas of interest or clarify ambiguous responses. The interviews record was transcribed by the researcher to ensure ease of analyses. After all audios were transcribed, the transcription was compared to the audio recording to ensure the accuracy and reliability of the information with the original. The anonymity and confidentiality of the participants mentioned in the interview were replaced by a serial number allocated to each participant.

Table 1: Description of sample

S/No	Level of management	Interview Type	Pages	Interview length (min)
Participant A	Lower Management	Fac-to face	5	32
Participant B	Senior Manager	Fac-to face	5	29
Participant C	Lower Management	Fac-to face	6	35
Participant D	Lower Management	Fac-to face	4	30
Participant E	Middle Management	Fac-to face	6	45
Participant F	Middle Management	Fac-to face	4	36
Participant G	Senior Manager	Fac-to face	4	37
Participant H	Top management	Fac-to face	5	42
Participant I	Middle Management	Fac-to face	6	36
Participant J	Middle Management	Fac-to face	3	28
Participant K	Middle Management	Fac-to face	4	38
Participant L	Lower Management	Fac-to face	5	30
Participant M	Lower Management	Fac-to face	4	33
Participant N	Lower Management	Fac-to face	4	29
	Totals		65	480

4.10 Data Analysis Approach

Generally, qualitative studies often involve substantial textual or narrative data; (Aspers & Corte, 2019), requiring in-depth analysis and interpretation of the information collected (Gear et al., 2018). Gear et al., (2018) define qualitative data analysis as giving meaning to raw data in answering the research question. The transcripts were coded and subjected to thematic analysis using the Atlasti data analysis system because it allowed the researcher to establish relationship in data and explore research findings. Thematic data analysis involves systematic identification, organization, and interpretation of patterns or themes within the dataset; and it provides a structured framework for analyzing qualitative data, allowing researchers to uncover key concepts, ideas, or patterns that emerge from the data (Bell et al., 2019).

4.11 Research Quality and Rigour

Reliability can be described as "how a questionnaire generates similar results on

repeated tests" (Easterby-Smith et al., 2021). In research, the importance and credibility of the collected data cannot be overstated. The reliability of the data collected is attributed mainly to the research instrument utilized. Therefore, an interview guide was developed and piloted for this study. The piloting process established the reliability of the research instrument and allow for addressing any issues raised. Additionally, it provided an opportunity to refine and finalize the research instrument, ensuring its effectiveness in collecting high-quality and relevant data.

4.12 Ethical Issues and Confidentiality

Ethical considerations are essential to every research project (DeTienne et al., 2021). It deals with a researcher's conduct concerning data collection and participants' treatment (Bell et al., 2019). Since the research is required to fulfil academic qualifications, firstly, the research will seek permission from the organisation to allow the collection of data, and after that will obtain ethical clearance University by following guidelines. Once the clearance is granted, a search will be collected. A prior informed consent will be sought from the participants and confidentiality will be respected before, during, and after the study; this is important to uphold the research quality (Bell et al., 2019).

4.13 Limitations of the study

It became apparent that there is a limited study done on the relationship between knowledge management on business model innovation in public enterprises generally (Agarwal et al., 2021); hence, the limited availability of literature and prior studies conducted on this topic in the context of African countries, specifically in Namibia and other developing or middle-income countries, may limit the ability to draw broad conclusions or make comparisons to existing literature.

4.14 Conclusion

This chapter explained the approach and methodology for this study. This study adopted the interpretivism as a philosophy and basis of inquiry. A qualitative method was used because it allowed the researcher to gain more insight into the research anchor. The population was the employees of BIPA of SOEs, mainly at the management level, of which 14 were interviewed. Chapter 5 presents the results of the study.

CHAPTER 5: PRESENTATION OF RESULTS

5.1 Introduction

This chapter presents a comprehensive analysis of the data collected and the findings for both primary and secondary data. The primary data of this study were collected through a face-to-face interview involving 14 participants across the entire organisation. The participants were also grouped in categories according to their level of management for easy of results presentation and analysis. A 10-structure question interview guide was used to gather the results. The results presented aim to address the research questions in Chapter 3. The chapter commenced with the approach to coding and thematic analysis, the participant's demography, and the study's findings according to the themes identified during the thematic analysis. A visual process of how data were analysed is presented in Figure 3.

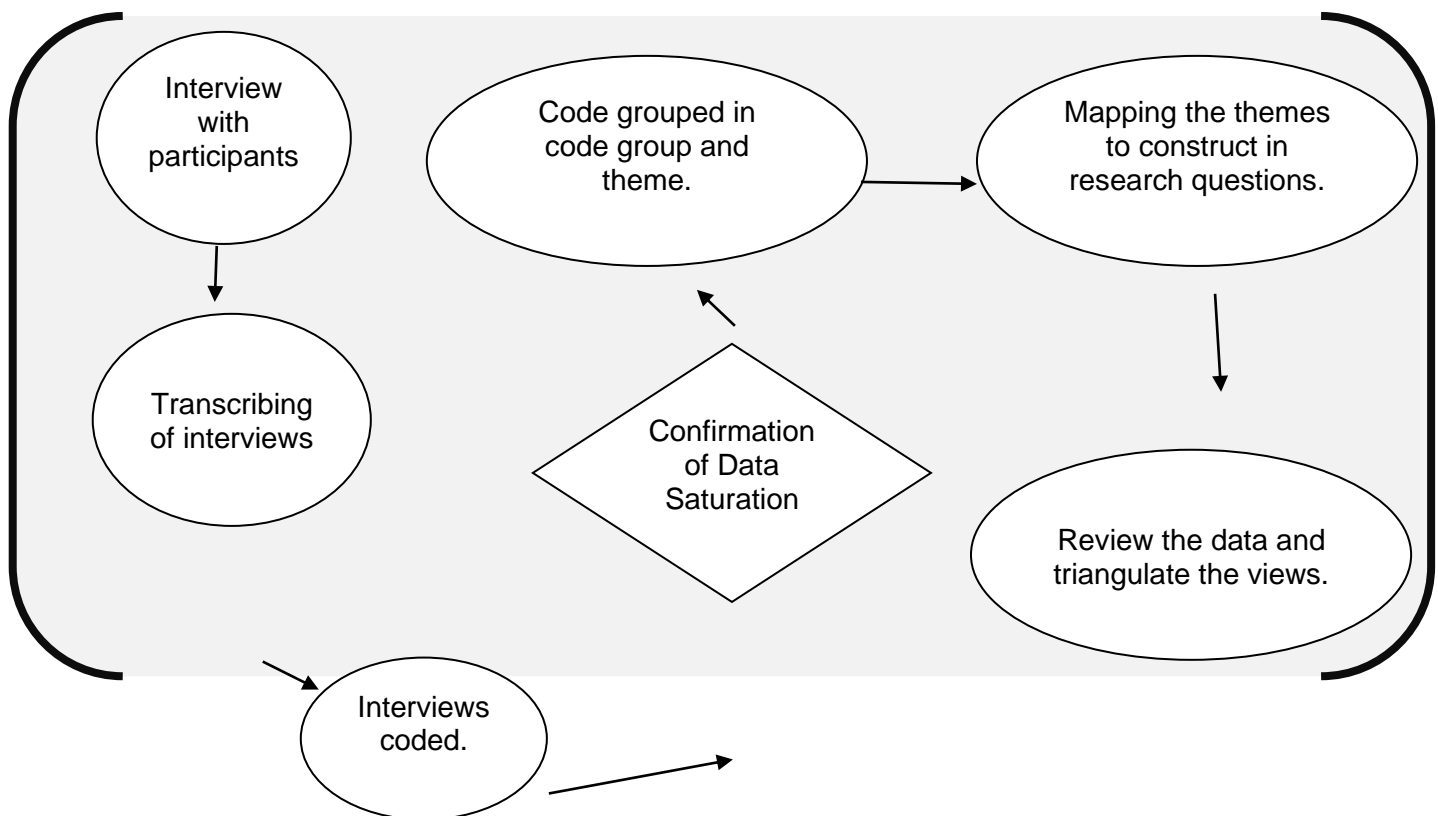


Figure 3: Thematic and Coding Process

Source: Author (2023)

5.2 Participants Profile

A total of 14 participants from the select SOE were interviewed. Table 2 displays the demographic information of the participants, such as their level, position at work, their level of education by qualification, and years of experience in SOEs. For better analysis, the participants were further divided into three categories according to their level of management: Junior Management Level (JML), Middle Management Level (MML), and Senior Management Level (SML). This arrangement was intentional to understand the phenomena from different perspectives and levels in the company.

5.3 Position, level of education, and years of experience in SOE

The participants were selected from different departments in the organisation; they all occupied positions of management and influence in the organisation ranging from Junior Management, Middle Management, and Senior Management. Four are junior management, eight are middle management, and two are senior management; this composition demonstrated a balanced and fair representation of all levels of management in understanding the phenomena from the organization's hierarchy.

Further, participants mainly occupied positions that dealt with stakeholders, communication technical, and systems; this was a deliberate act to ensure the right people were interviewed for the study. Last holds high-level degrees in various fields, from bachelor's degrees, Honors degrees, and Masters degrees; 8 of the participants have Master's degrees. The participants' years of experience were also assessed to ensure the credibility and potential of participants in providing reliable information for the interview; the average year of experience is 34 years working for SOE. Some participants worked for two years, while others worked for 16 years in the public sector.

Table 2: Demography Profile of Participants

S/No	Level of Management (Group)	Position	Level of education	No. of years of Experience in SOEs
1.	JML	Senior System Analyst	Honours degree in Business Administration	7
2.	MML	Manager for Finance and Administration	MBA degree in Accounting and Finance	8
3.	MML	Manager for Client Service	master's degree in sustainable urban planning and development	13
4.	MML	Manager for records management and archiving	master's degree in business administration	2
5.	SML	Executive for Finance and Administration	MBA in Finance and a professional certification with the Association of Certified Chartered Accountants (ACCA).	8
6.	MML	Manager for Marketing and Corporate Communications	Bachelor of Marketing and Communication	4
7.	JML	Senior Client Services Consultant	MBA in Finance Management	11
8.	SML	Executive for ICT	Master's Degree in Information Technology	16
9.	MML	Manager IP Frameworks	Master of Arts in communication and journalism	17

10.	MML	Trademark Manager	MBA and Master in Intellectual Property	12
11.	MML	Manager Business Registration	Bachelor Degree Economics	16
12.	MML	Acting Company Secretary	Honours Degree in Business Management	6
13.	JML	Senior Business Registration Officer	Bachelor's Degree in Business administration	16
14.	JML	Cost and Management accountant	Honours in Management Accounting	5

Source: Author (2023)

5.4 Participant's Unique Identifier

The participants were grouped into three categories according to their level of management. In ensuring the anonymity promised in Chapter 4, all participants were allocated a unique identifier different from their names. Table 3 represents the participants' information with their unique identities. Throughout this chapter, the participant will be referred to using the unique identifier for anonymity. All three categories of management level are well represented with a fair balance of all categories.

Table 3: Participants Unique Identifiers

S/No	Unique Identifiers	Level of Management (Group)
1.	Participant A	JML
2.	Participant B	MML
3.	Participant C	MML
4.	Participant D	MML
5.	Participant E	SML
6.	Participant F	MML
7.	Participant G	JML
8.	Participant H	SML

9.	Participant I	MML
10.	Participant J	MML
11.	Participant K	MML
12.	Participant L	MML
13.	Participant M	JML
14.	Participant N	JML

Source: Author (2023)

5.5 Themes Emerged

During the first level of transcript analysis, a total of 215 codes were identified from the 14 participants. This process emanated from the eight questions of the interview schedule; in the second level of coding, the codes were reduced to 112 unique codes. The codes were analysed using the inductive processes and grouped into themes according to the interview question in Table 4.

Table 4: Themes and Theoretical Group

S/No	Questions as per the interview Schedule	Themes	Theoretical Group
1.	What are the types of stakeholders/partners you work with or engage with as an organisation	Categories of Stakeholders	Network Collaboration
		Foundation of Collaboration	
2.	Do the engagements with stakeholders or partners result in inputs/feedback that you consider as knowledge to your organization?	The impact of stakeholder inputs	Knowledge Flows
3.	What are some of the examples of inputs or contributions from these engagements with stakeholders and partners?	Types of Stakeholder Inputs Contribution	
4.	How important or valuable are the		

	inputs or contributions to the organization?		
5.	What are the methods that your organization use to manage, record, and store the inputs/feedback/contribution from these engagements.	Internal inputs management	Knowledge Management
6.	What are the common methods or modes that public sector organization use to share information, input/feedback, and best practices? How effective are these?	SOEs Interaction methods	Network Collaboration
7.	How input feedback/information from the engagement with stakeholders helped your organization to improve or adjust their business model? Please explain your answer	Business Model Impact	Business Model Innovation

Sources: Author (2023)

5.6 Themes on Research Questions

After a second level of coding, the codes were grouped according to emerging themes and theoretical groups. Then, themes were identified according to interview schedule questions. The themes were then allocated according to the research questions for better analysis. This arrangement is a deliberate act to ensure that each construct of the research questions is covered, as indicated in Table 5.

Table 5: Themes Per RQ

Main RQ	Sub-question	Themes to be discussed
What are the key mechanisms and channels through	What are the key mechanisms and channels through which	1. Categories of Stakeholders
		2. Foundation of Collaboration

which knowledge streams arise from network collaborations in your organisation?	knowledge streams arise from network collaborations in your organisation?	3. Types of Stakeholder Inputs Contribution
		4. Internal inputs Management
	5. SOEs Interaction Methods	
	6. The impact of stakeholder inputs	
	7. Business Model Impact	
	How do these knowledge streams from network collaborations assist the public sector in making changes or adjusting their business model?	

Source: Author (2023)

5.7 Research Findings

The data analysis process aimed to gain a deeper understanding and comprehension of the participants' responses in providing insights into the research questions. The central question of the research is to understand how knowledge flow from collaboration contributes to the innovation of the business model. This was done by using two sub-questions. Through the process of deductive thematic analysis of the participant response, a position on the research question is determined and presented according to the themes raised.

5.8 Results of the Research Question

Main Research Question: How does the knowledge arising from network collaborations contribute to business model innovation in Namibia SOEs?

Research Sub Question 1: What are the key mechanisms and channels through which knowledge streams arise from network collaborations in your organisation?

This sub-question serves as the foundation of this research anchor; it aims to get information on how knowledge flows into an organisation. The interview questions were designed to allow participants to discuss essential information regarding the mechanisms for collaboration, the actual collaboration partners, the nature or types of inputs or contributions, and the significance of the input if they could be regarded as knowledge or capabilities to the organisation. Additional interview questions were also in place to ensure that a further probe is made into the internal mechanisms to manage

the input received; the method is that SOEs used to come together and share information and, subsequently, their effectiveness. So, this question is covered by seven themes.

- **Categories of Stakeholders**

All the participants demonstrated a better understanding of the constructs, and in some instances, they appreciated the constructs after I provided clarity. In essence, participants indicated that partnership and collaboration are the order of the day among SOEs. The interviewees specify that the SOEs are frequently involved in collaborations that are sometimes required as per the establishing statutes, for resource mobilisation, for implementation of national projects, and above all because of an act of good practices and corporate governance, and this participant H expounded in more detail.

Participant H: "Collaboration is an everyday thing in the public sector, and I am sure it is everywhere. Even now, I come from a meeting with the Bank of Namibia on the implementation of the Beneficial Ownership Project. We value collaboration, and as an organisation, we do it because we believe in good practices, and some time is mainly for consolidating resources. When two come together, it is easy."

A significant finding emerges on the categories of stakeholders that SOEs commonly collaborate with deals. According to the interviewees' responses, the categories are mainly the Government, Non-Profit Organisations, and Private sector. These categories were further expanded to cluster such clients, suppliers, developmental partners, as well as non-governmental organisations.

When it comes to the shareholders, SOEs are government-owned and often collaborate with the line ministry or ministry responsible for portfolios to implement government-driven projects that are related to the SOE's mandates.

Participant L: "With our daily engagement, we work closely with the MIT as our direct ministry; I mean, we get all directive and policy guidance from them."

In the context of suppliers are vendors that enable the organisation to implement certain protection, and they supply with the facility.

Participant A: *“Suppliers are some of our stakeholders when it comes to a partnership; we have much engagement with vendors for systems such as ICRS, PASTEL, client management, and ERP.”*

Participant M added:

“We deal with several stakeholders, including individuals walking in from the street one day to Agents or consultants, the line ministry, and other SOEs and institutions like banks. It varies depending on the client's needs and profile”.

In addition, SOEs collaborate with developmental partners and inter-governmental organisations; another participant added as follows:

Participant J: *“Our most significant stakeholders include our clients, agencies, lawyers, and other SOEs, such as Namibia Revenue Agencies and the Namibia Financial Authority. We also collaborate with international organisations; on an international level, we often partner with the World Intellectual Property Organization (WIPO) and the corroboration mainly in capacity building and intellectual property system infrastructure, and on a regional level, our usual partner is the African Regional Intellectual Property Organisation, especially in the field of intellectual property”.*

All participants responded positively with explained categories of stakeholders, and they also added the reason or project that they collaborated with. One of the participants indicated how the organisation values and main collaboration as it is something that is aligned with their business strategy.

- **Foundation of Collaboration**

This theme was aimed at understanding the foundation of collaboration in SOE's organisation. It results from the sub-questions that was, what promotes the collaboration with different types of stakeholders as mentioned? The theme is meant to reveal the collaboration reasons and activities that mostly. According to participants,

the form of collaboration is mainly driven by the mandates of an organisation or by the strategic issue that the organisation is trying to solve. However, many of the participants said it is driven by things like implementing a project, law reform, consumer education, and systems implementation. Again, in this theme, participants demonstrated a better understanding of the question; hence, their responses assisted the researcher in answering the question. Participant G stated that:

Participant G: "As a client-based organisation, we frequently engage our clients with a basis of understanding their concerns and burning issues regarding our services; we divided our clients into groups such as Law firms, Accounting officers, and Company Secretariate Agents. Our reason for engaging them is mainly on maintaining a relationship with our clients and understand them so that we serve them better. Also, we often hold meetings with them, especially when we have to or wish to introduce new changes or regulations".

The reason for collaboration or engagement in SOEs is different from the cluster of stakeholders, and one of the participants who is in governance states that:

Participant L: "Because I work closely with the board, we regularly engage the line Ministry for direction and approval of new; for example, when we have to change or amend the law on company and copyright, we have extensive consultations."

Many participants mentioned that system implementation and upgrade is one of the reasons for the basis of the usual corporation. One of the participants stated:

Participant K: "I think at this point I can say that our biggest stakeholder our local vendor, which is our vendor for the company registration system. You know since the organisation was established, we have been trying to improve of Integrated Company Registration System (ICRS) to be friendly; so, we meet this vendor on regular basis for these reasons".

Another one added:

Participant B: "I can say we engage with our bank regularly because we

want them to assist us with a better way of cash collection in a way that when client deposited money in the bank account; the amount will automatically be allocated to the client accounted with a unique code. We want this process through so that it can eliminate the discrepancies in reconciliation and allow clients to have credit balance on their account. You know things take so long but we are trying since last year”.

This position was confirmed by another participant who said:

Participant N : “Mainly consult for implementation of project and systems that are aimed to improve our serves delivery, like we are in the process of introducing an ERP system we have been on and off with the supplier who is trying to ensure that we implement this project effectively”.

The participants also stated that they deal with stakeholders from outside the country. The majority indicated their many reasons are mainly the implementation of some of the common grounds in areas of the area of their interest. It appears that this is the biggest area of collaboration in their organisation. The participant explained as follows:

Participant J: “We often deal with WIPO and ARIPO to implement the intellectual Property laws and we do this through implementation of various project such as modification of the Intellectual Property Administration System (IPAS), Member statement modules and others. Also, we work together with them in order to understand various treaties for implementation in Namibia. You know our organisation represent deals with the intellectual Property Right, which is not only a Namibian thing, but I can also assure that on year basis is our staff attend meeting virtual or in person concerning intellectual property development in African and in the world at large”.

In conclusion, many participants view the collaborations as driven by a number of factors, but not limited to stakeholder engagement, project implementation, law reviews, systems upgrades, and, to an extent, bilateral and trilateral relationships with regional and international organisations.

- **Types of Stakeholder Inputs Contribution**

The types of stakeholder inputs are yet another theme that emerged during the question of different types of stakeholders that organisation deals with. The question was internal in understanding the different types of feedback or inputs that SOE receives during the engagement of the organisation and matching whether they will be useful to be regarded as knowledge and how it plays out to influence the way of interacting with clients at the end.

The theme became evident when participants indicated that, indeed, through collaboration and engagement with stakeholders, they do get what they recognise as knowledge to the organisation. During the process, participant requested an explanation of what was regarded as knowledge, and after it was explained to them, they appreciated the question, and they shared their response. In relation to whether they received input or feedback, one of the participants stated as follows:

Participant C: "Yes, indeed, we received feedback and inputs from our stakeholders that we engage; for example, clients always complain about our manual work and suggest that we try to use an online system that will help them to do filling from the comfort of their house and offices."

Participant F added that:

Participant F: "The digital economy allows customers to do a digital filling, and as an organisation, we are far from this; digital transformation is one of the suggestions we receive from our clients and partners that we deal with."

It became evident that inputs received related to the organisation services delivery and the expansion of the organisation services also feature in the inputs and contributions; one of the participants stated that:

Participant C: "You know client wish to also receive between 13h00 to 14H00, hence one of the suggest is also to extend our operating hours".

The input on dissatisfaction with services was confirmed by another participant who said:

Participant K: *“Client usual I complain to long distance between the town to get the service and they wish BIPA to have force in different regions and towns”.*

Another interesting contribution related to the legal frameworks that the organisation enforces or draw mandates to deliver their services; according to participants, some of the feedback is toward the laws and policies that define their mandate and which in turn dictate the organisation business model or the way of doing business to this one of the participants states that:

Participant E: *“You know the business environment keeps changing and until today we are still suing the law that was made in 1996 and 2004, our shareholder and local partner expressed the dissatisfaction with our outdate laws and they wish them to be changes to be more digital friendly such that they allow electronic signature and all that”.*

Another participant added that:

Participant J: *“The law that we use to regulate the copyright can not protect the copyright contents in the digital evident, the creative sector normally raises challenges with protection of their music and photos on internet and wish some changes in this law”.*

Another code that emerged in this theme is the internal system aspect; the majority of participants spoke toward system ineffectiveness and indicated that one of their systems has now been upgraded because of the consolidated feedback from the vendors and customers.

Participant N: *“Our ICRS system is not designed to provide update statement of account to customer on the go, our account has to manual intervene, which make it not a smart system and above all our system are not integrated or interlinked. This situation frustrates clients so much that every time we meet, they; this issue is always raised. Our vendor recommends the Enterprise Resource Planning System which we are busy scoping”.*

In summary of the type of stakeholder input contribution, many participants demonstrated the overwhelming inputs that they received from their partners,

collaborators, and stakeholders. The evidence is strong that these inputs and contributions are related to SOEs ways of doing or conducting business, particularly in service delivery. According to the participants, the inputs are in areas such as legal frameworks, policy review, digitalisation, system improvement, and upgrades.

- **Internal Management of inputs and contribution**

In understanding the mechanisms and channels through which knowledge streams arise from network collaborations in SOEs, the internal management of inputs and contributions emerged as a theme. This theme results from the interview question about how inputs are received, handled, and managed in the organisation. This is one of the questions that the response was divided. However, the majority of the respondents have indicated that there is no internal arrangement for documentation, recording, and managing of the inputs and contributions from the arrays of the stakeholders enlisted under the previous theme above. One of the participants stated:

Participant G: *"I don't think we have a formal way on that we used to manage these inputs. managed, All I know is that each time a person attends stakeholder engagement; information is shared on the internal communication email, but it does not mention the feedback to the organisation".*

In support of this, participant D added that:

Participant D: *"I get it know, we currently don't have formal system for to documenting and recording this contribution and feedback about our services, that is why I said earlier that many of these contributions get loss in the way. Often information and inputs are usually verbally relayed from employee to management and vice versa, this is dangerous and does not help us to learn from this feedback".*

Another participant added:

Participant M: *"From my experience, I know that when an employee attends a meeting for example with stakeholder, he /she is expected to compile a report about the meeting and the engagement, but not sure if this report is shared with everyone because I for one have not seen*

any”.

Another participant said:

Participant A: “As an organisation I don’t think we have a dedicated platform where we store and discuss the inputs. This information ends up only with the employee who attend the engagement”.

This was concurred by the participants, who stated that:

Participant C: “I joined the organisation 3 years back and until today I haven seen a back to office report of other department; that is why is difficult for me to say whether we have a system or a method of managing this input. And the risk is that this helpful feedback and contribution that may assist the organisation to improve can go missing and not unitise to the best interest of the organisation”.

With the majority of participants indicating that they are not aware of any internal method of managing and storing the records, few participants indicated there are mechanisms in place to manage the inputs; however, the possibility of them being infective cannot be ruled out and this is what the participants says:

Participant E: “Storing inputs, it can be challenges even though I know we internal share folder and internal communication that we use to share information of whatever kind. However, this platform can be quite not effective in terms of retrieving and storing the information from partners. It will be good if the office has something like library or a physical information office where this can be stored, and everyone is free to go and read up to them”.

This theme also enables the researcher to understand areas of improvement for the internal arrangement or management of inputs. Participant F said the following:

Participant F: “Normally, inputs come through internal emails, hotlines, and sometimes during face-to-face engagements, which are documented in "Back to Office" reports. While these mechanisms exist, I believe they are not adequate for storing this type of information,

especially when it should be readily available and shared. I think a better solution, such as a cloud-based platform where all this information can be stored and easily accessed. Information is power and can empower individuals to innovate, create, and modify business processes, provided they are well-informed”.

Another one indicates that:

Participant L: “I think it would be good if this information can be like shared with all on shareholder or a different platform and discussed for improvement”.

This was also supported by another participant who said:

Participant E: “It will be advisable to have a digitalised central repository that is well organised and structured to enhance our ability to access and utilise the inputs and contribution in future; I don’t want to think of a situation a where an employee resigns and no documentation of this input; it will go missing and organisation loos out.

In conclusion, the internal management of inputs is vital for an organisation; participants showed an interest in an organisation having a proper mechanism for managing and recording the inputs, and they believe that it will help an organisation to improve service delivery. Participants further indicated that effective methods are needed to ensure that everyone can retrieve and utilise the inputs to the benefits of the organisation.

- **SOEs Interaction Methods**

Since this research focuses on SOE collaboration, an interesting theme related to the methods and mechanisms that SOEs use to share information emerged. This was important in determining the common method that the private sector used to collaborate and share inputs. Service delivery, particularly in the public sector, is built upon the principle of common courses and best practices; hence, learning from similar organisations is an important part of the strategy.

The interview question was: what are the common methods or modes that public sector organizations use to share information, input/feedback, and best practices? How

effective are these? Finding out about these methods is paramount to the sector to see which one works effectively and how it can be enhanced. Furthermore, this theme enabled the researcher to determine the effective method of collaboration and networking among SOEs.

The majority of responses indicated they have no idea of common methods that SOEs use to share best practices related to service delivery. One of the participants stated that:

Participant K: "Having been in this industry since the inception of BIPA, I can say that there is no defined or dedicated platform for sharing information between SOEs. I hear of SOEs forum but seen I join this organisation we did not take part; can you imagine. Also, I can't regard it as a proper platform for knowledge sharing as it is for recreational activities for SOEs to build harmony. A lot of people will agree with me that SOEs, operate in silos, and this situation has affected service delivery in the public sector; You know a lot of SOEs are quite doing well for example when it comes to digitalisation, and I think other SOEs can learn from them. I believe that more enable SOEs to learn best practices from each other, maybe something like intranet, chatgroup or even a library for SOEs".

Another participant confirms this position by stating that:

Participant H: "I am not familiar with dedicated forum for executives to exchange ideas. If I want to know what other SOEs are doing, I research on my own reach out to other people that I know in different organisation and discuss issues related IT strategy or cybersecurity. However, it would be beneficial to establish a platform where all ICT executives in SOEs can come together to share insights and best practices".

Another participant who seems not to be aware of any particular common method well designed for SOEs to share information, considering that they all belong to one shareholder, stated that:

Participant G: "I am not aware of any existing platform specifically designed for this purpose, but I can relate to the concept of SOE forums,

which are held annually. It is prudent for SOEs to establish modern platforms for sharing best practices and insights on how processes and operations can be improved”.

Participant G added that:

Participant G: “As an organization, we understand the importance of learning from each other, sure there is not a dedicated platform, but what we normally do to ensure that we learn from each; we do benchmark exercise to other organisations; where we go and learn best practices and try to implement and incorporate it in our process. I know even when we implemented our tribunal, we learn from land tribunal, and it was very useful you see. I believe that a dedicated platform for sharing information can be very useful and value creation for SOEs.”

Although the majority indicate platforms such as SOE forums, they seem not to regard it as a forum for knowledge creation given that it is only once a year.

Participant E: “At this point, some government entities in Namibia are undergoing significant changes. The common method of sharing information among these government entities is through annual reports and annual forums held each year. However, I believe that modern technology offers better solutions, such as creating a dedicated platform for information and knowledge sharing among SOEs.”

Another participant added that:

Participant C: “Maybe the SOEs forum, which is an annual event. And to be honest this forum is meant to gather, engage in sports, and exchange information but I can’t confidently say that this is the platform for this. This activity happens three days in a year; that is why I have reservations about its effectiveness as a platform for sharing best practices since most of its activities appear to revolve around recreational pursuits.”

In conclusion of the participant response on this theme, some participants indicated that each SOE has a website and can always look up information that they want. One

of the participants states that:

Participant E: *“As we all know that we live in the world of technology, if I want to learn about other SOE, I normally use their website and search for information. One of my common types of research point is on the annual report for SOEs, and I always pick up what I am looking for. Another that I can thin of is meetings and social media account; through this one can also learn about another organisation.”*

Research Question Conclusion

This research sub-question focused on understanding the different types of stakeholders as well as the types of inputs that emanated from networks or collaboration. Through its different themes raised, this question allowed the participant to share information that are relevant to answering the research question. Further, it dives into the methods of managing inputs from stakeholders focusing on internal process. During the analysis, it became evident that participant feels that surely organisation benefits from networking and collaborations in different ways. For instance, through policies, systems, and many others; however, they also indicate that information is not managed in a manner that it should in a way that it can be easily retrieved and used by another person for the benefit of the organisation. The equation also pondered on whether SOEs have a dedicated method for sharing information, of which participants have different views, of course. However, the majority indicated that they are not aware of any methods.

Research Sub Question 2: How do these knowledge streams from network collaborations assist the public sector to make changes or adjust their business model?

This question aimed to find out from the participants if they think the institution received from collaboration and networks they do contributes to the changes or innovation in how the business delivers its services. A myriad of interview questions was used to gather answers and responses to this research question. During the data analysis, three themes developed related to this research sub-questions, and through this trio theme, the response to this question was presented.

- **The impact and value of stakeholder inputs**

This theme digs deep into the substance of inputs and contributions received from collaboration and networking. The foundation was to determine if it is worth it to collaborate or not by weighing the value and the importance of the contribution that comes from this networking in relation to the SOE's mandate and responsibilities. The root of the interview question was how important or valuable the input and contribution to SOEs or your organisation were. All participants indicated that collaboration and networking indeed birth relevant input and useful contributions that will assist the organisation in the development to deliver the services effectively. One of the participants indicated that:

Participant C: *“Off course, these networking serves as invaluable sources of knowledge and insights. I like to say that they are cross-examinations of our ideas.”*

Another participant agreed with the above position by stating that:

Participant A: *“Our interactions with our developmental partners have consistently yielded valuable inputs and feedback that we consider highly valuable knowledge within our organisation; can you imagine a situation where an organisation does not receive feedback from its stakeholder, it cannot grow nor improve. What we receive I can characterise it as important insights have a direct impact on our strategic decisions and operational improvements.”*

One of the participants who agreed elaborated in detail as follows:

Participant B: *“If I understand the question well, I will say yes. I consider knowledge to be information rights that aim to improve services or our operations as an organisation. Especially during stakeholder engagements, we often see opportunities for improvement, and we recognize that some of these institutions are more advanced than us. We can learn from their progress, especially in terms of system improvements, customer services and culture improvements”.*

Another participant recalls what they do and the importance of the inputs as follows:

Participant F: *“We hold quarterly stakeholder engagements with them,*

and just yesterday, we had one such meeting. During these interactions, we seek their advice on how to better manage our loose forms. Our aim is to ensure that when our clients request information, all necessary documents are readily available in one file”.

In conclusion, the evidence is overwhelming from a participant that, indeed, networking yields important information and valuable input that are regarded as knowledge to the organisation, as the last participant stressed below.

Participant H: *“Yes, often during stakeholder engagements, we receive input related to new solutions and in the areas of changes to existing products and to an extent related to our systems”.*

- **Impacts on Business Model**

The impact on the business model theme is how the input received is used to change the way the organisation conducts its business. The sub-question was: How did input feedback/information from the engagement with stakeholders help your organization to improve or adjust its business model? The terms business model innovation was explained to them in simple language as the change in the way the organisation delivers services. The participants answered the question and provided detailed responses to the researcher. All the response indicates that the inputs that they received have an impact on the business model innovation. Participant C stated that:

Participant C: *“In one of these engagements with the banking sector, we discovered that uncovered a bottleneck that was affecting our clients. Banks often requested redundant verification of our founding statements, which unnecessarily delayed our clients. Through the input from the clients we were able to shorten our internal processes and significantly improve our services; this sound small but it addressed a burning issue that have been for long.*

“Another example that I wish to share with you is the introduction of our call centres. Between 2021 and 2022 our office used to be overwhelmed by increase in the number of incoming calls, with the average monthly calls surging from approximately 2500 to about 5000; with this situation we engaged the Government Pension fund and learned from their process; we then implemented a call centre and it was mapped

according to inputs from client”.

Another participant shared some examples that resulted from their contribution and how it helped the organisation to improve their business model. The participant stated that:

Participant G: “I would like to highlight the introduction of the Case Management System that that stated in 2021. This system helps us manage walk-in clients on a first-come, first-served basis; this system was introduced because the walk-in client were unhappy with how they are served and they raised their concern at a meeting the was held sometime in 2020 with Agents.”

Through data analysis, there are practical examples that indicate that the inputs have a valuable impact on the changes in the business model of an organisation; other participants shared an example of changes in internal systems by stating that:

Participant B: “one of the examples that is close to my heart is the implementation of the Enterprise Resource Planning (ERP) system, which we are currently developing in collaboration with our vendors and local banks. The goal of this system is to enhance our business operations by automating certain activities and creating a seamless approach to serving clients, both externally and internally”.

ERP appears to be one of the common examples of how input received is used wisely to change the business model innovation, and other participants consume this by stating that.

Participant N: “The input from our stakeholders led to the implementation of our ERP system, streamlining revenue collection and allocation. As a result, we have not only increased efficiency but also enhanced our reputation for transparent financial practices, which has positively impacted our relationships with stakeholders.”

Another participant added that:

Participant I: *“Look sometimes go, WIPO was concerned about us still using a manual system for registering intellectual property, they introduce us to a digital system for managing intellectual rights and they actual sponsored it. This system has assistance our organisation to streamline our process for examination and managing intellectual rights for our client. Also, the system allows some limited services to be accessed from any whereby our client, such as searching for prior use. I can tell you that there is so much power in collaboration because we could do this on our own. Sometimes resources are not there at all.”*

Another participant also mentioned how their supplier assisted them with recommendations to improve the company registration system, which seems to be a problematic in-service delivery for part years. The participants said:

Participant M: *“Our vendor, with whom we worked on the system, helped us improve the way we do business, strengthen our effective controls, and reduce turnaround time because things are captured in the system, making work easier and less stressful from both the client and employee perspectives”.*

- **Research question conclusion**

In summary of the research sub-question, all participants demonstrated that the inputs received from networking are indeed knowledge to the organisation because they are valued inputs and important. They affirmed that through networking, organisations get access to capabilities and technical know-how that they never had in order to create and change the way they do business. Participants also indicate that some of the notable examples are in an area where the organisation improves and innovation in their systems, moving away from the manual to digitalisation where clients to access some services online.

5.9 Chapter Conclusion

Chapter 5 analysed the study findings according to the analysis of the response of the participants that were interviewed. The findings of the analysis were summarized and backed with direct speech marks capturing a view of each participant. A comprehensive comparative analysis was done, particularly in instances where the views of the participants were divided, and it was to ensure a balance in analysis is maintained. The response was triangled according to the level of management in the organisation for a fair balance of representation.

The analysis of the results is presented according to the research questions narrated in Chapter 3 and arranged as per the seven themes identified during data analysis. These themes were identified through a deductive analysis approach.

Summary of findings of the Theoretical Themes

The responses provided by the participants in the study were systematically categorized into seven distinct themes. These themes encompassed various aspects of the research, shedding light on the diverse perspectives and experiences of the stakeholders. In the ensuing table, the overarching direction of their responses is comprehensively presented. The categories within this table include an exploration of different stakeholder groups, the foundations of collaboration, internal management inputs, methods of interaction with SOEs, the types of contributions made by stakeholders, and the consequential impact of their inputs on the business model. This structured approach allowed for a holistic examination of response in the next section for the according to theoretical group.

Figure 4: Summary of findings of the Theoretical Themes

Categories	Overall Response
Categories of Stakeholders	The participants were fully aligned with the different types of stakeholders that organisations deal with, and most of their terms were on par.
Foundation of Collaboration	Participants demonstrated a clear understanding of the basis of collaboration, and in many instances, their views were aligned with each other.

Internal inputs Management	Participant views were divided; some demonstrated limited knowledge and no agreement in view at all.
SOEs Interaction Methods	The participants demonstrated a partial alignment in the views.
Types of Stakeholder Inputs Contribution	The participants indicate the categories of input received such as contribution related to services delivery, Law reforms and policies development.
The impact of stakeholder inputs	Participant were fully aligned in their views.
Business Model Impact	Participant were fully aligned in their views.

Source: Author (2023)

Chapter 6 will discuss the findings and their relation to the research question in detail,

CHAPTER 6 DISCUSSION

6.1 Introduction

This chapter discussed the research findings as presented in Chapter 5. The results are presented and discussed according to the theoretical constructs elucidated in the literature review and associated themes as described in Chapter 5. The research findings are systematically presented to answer the research question as presented in Chapter 3. The findings of this study are to gain insights into information and answer the main research question: how does the knowledge arising from network collaborations contribute to business model innovation in Namibia SOEs?

Figure 4 illustrates the approach to the finding's presentation. The discussion of the findings is systematically presented according to the research questions in Chapter 3, matched with theoretical categories and themes for each sub-question as allotted in Chapter 5.

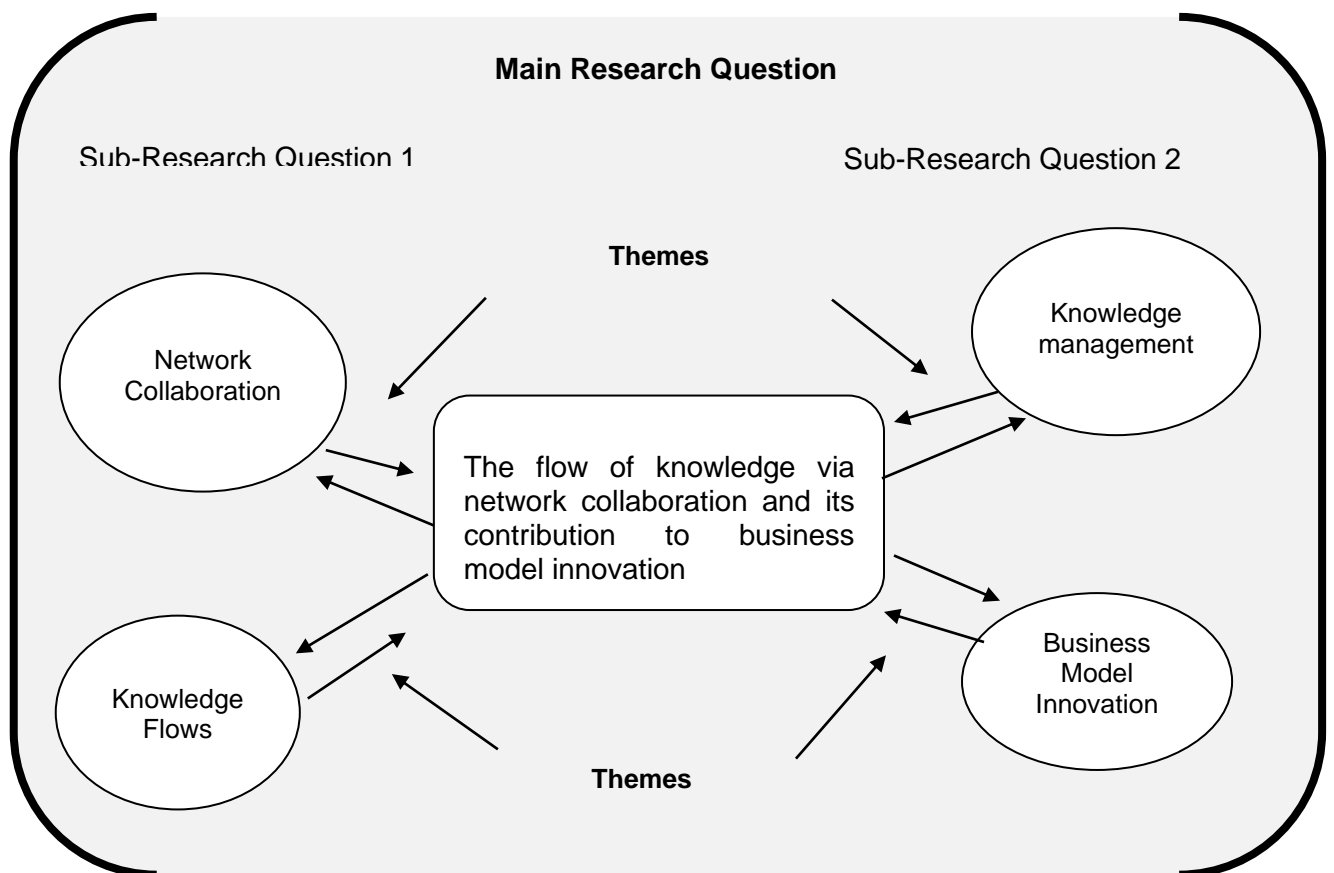


Figure 5: Conceptual Framework of the research

Source: Author (2023)

This chapter returns to the literature in Chapter 2 to relate the research findings to the previous literature and answer the research questions as follows:

The Main Research Question:

- *How does the knowledge arising from network collaborations contribute to business model innovation?*

While the Research Sub-Question 1 was:

- *What are the key mechanisms and channels through which knowledge streams arise from network collaborations in your organisation?*

While the Research Sub-Question 2 was:

- *How do these knowledge streams from network collaborations contribute to business model innovation in the public sector?*

6.2 Discussion

A total of 14 participants between the levels of junior management and senior management were purposively selected and interviewed for this study. The participants were selected from different departments according to their level of involvement in management and the likelihood of providing relevant information to answer the research question. The purposive selection was further necessary to ensure that the study captured different and diverse opinions to enrich the study. Out of the 14 participants, 5 are males and 9 females. In this section, the sub-research questions, which are all part of the main questions, are discussed in detail.

- **Discussion of results for research Questions**

Research Sub-Question 1: What are the key mechanisms and channels through which knowledge streams arise from network collaborations in your organisation?

Research sub-question 1 was aimed at the identification of possible channels and different collaboration methods that are most used by SOEs. As discussed in Chapter 2, Hock-Doepgen et al. (2021)

indicated that organisations acquire knowledge through various forms, and they are categorised according to internal and external sources. They further suggested that organisations do engage in different types of collaboration and networking, which are undoubtedly considered sources of knowledge as well. However, details were lacking in the literature on different forms of collaboration and networking among SOEs and how knowledge from networking and collaborations is managed. The three theoretical themes arise from the literature review, with five comparable themes emerging from participants' data; therefore, here, the findings and results are discussed to answer the sub-question.

6.2..1 Theoretical Group 1: Network Collaborations

The network collaboration is the first theoretical group of this study, and it recognises that organisations do collaborate and network with various stakeholders, which, in the end, enables them to acquire knowledge from this networking stream. Network collaboration is a form of knowledge management "refers to the process of knowledge exchange and creation that occurs when individuals or organizations engage in collaborative activities or networked relationships" (Hock-doepgen et al., 2021, p. 695). Basically, network collaboration is just a specific stream of knowledge acquisition and knowledge creation.

The network collaboration is framed around three themes, namely the theme of types of stakeholders, the foundation of networking and collaboration, as well as SOEs interaction methods. In theory, network collaboration explores whether SOEs network and with whom or the group of stakeholders that they deal. In addition, this category established the reasons for networking and collaboration. This was to assist in answering the research question systematically. The findings show that, indeed, SOEs do network and collaborate with several stakeholders for various reasons. Furthermore, the results indicate that SOEs, as entities that are owned by the government, do not have a dedicated platform for interaction or engagement for the purpose of knowledge sharing and exchange, which is an alarm to strengthen public sector best practices.

- **Categories of Stakeholders**

This theme grouped different types of stakeholders that SOEs collaborate and network with. The participants indicated that, generally, SOEs deal with countless stakeholders. All participants at least mentioned a group of stakeholders that the SOEs deals with, although there was an observation that the participants mentioned stakeholder that falls within their area of operation; the emphasis was placed on clients, government as a shareholder, banks (both commercial and central bank), developmental partners, and suppliers. Furthermore, participants highlighted that SOEs often partner with vendors or suppliers of services while they dominantly network with developmental partners such as intergovernmental organisations.

The literature defines stakeholders as individuals, groups, or entities with a vested interest in a specific project or organisation (Tsai et al. 2022, p. 435). There was a general consensus among participants on the types of stakeholders that organisations network or collaborate with, such as customers, suppliers, investors, shareholders, and communities, which is in agreement with Hock-Doepgen et al. (2021, p. 684). While there is an agreement in research findings and literature on this aspect results, the results further disclosed that SOEs further network with developmental partners and participants specifically referred to inter-government organisations operating in or outside the country.

Therefore, these results indicate that SOEs do network and collaborate with different types of stakeholders in their daily operations, a group of categories that align with the literature (Hock-Doepgen et al., 2021, p. 684). The results further indicate an emerging additional type of stakeholder to the list of commonly known stakeholders and, thus, an extension to the extant body of literature.

- **The foundation of networking and Collaboration**

The second theme in the theoretical categories of network collaboration explored the foundation, rationale, or motive behind SOEs' networking and collaboration with the stakeholders, as mentioned in the first theme. The results divulge that different reasons necessitate networking and collaborations. The results characterised the reasons for collaboration into two major groups, namely, the stakeholder relationship and management motive and the statutory obligation that required such network and collaboration. From this angle, it is evident that although the SOEs participate in networking and collaboration, some of the engagements are based on good practices

of corporate governance, while others lean toward compliance with the SOEs governing legal framework.

The results further disclosed that despite the two general motives or rationale for collaboration and networking. SOEs have specific objectives that justify a certain networking or collaboration. All participants indicated that often, in organisations in the public sector, the foundation of collaboration is grounded in different objectives, such as the co-implementation of a multilateral project, procurement transactions, law reforms, consumer/client relationships, major systems implementation, and member states affiliation engagement.

Different types of collaboration and network is one of the key constructs highlighted in the literature. Ferraris et al. (2021, p. 295) narrated that collaboration and networking as a knowledge stream can take many forms, such as sharing best practices, conducting joint research, co-creating new products or services, or exchanging tacit knowledge through personal relationships. While the main part of the literature review focuses on best practices of stakeholder engagement, additional literature disclosed the engagement that is motivated by bringing resources and experts together in implementing projects. Zhang et al. (2022, p. 3) pointed to the aspects of collaboration that are based on resource consolidation. The body of literature also reveals that various networking is mainly grounded in knowledge sharing and feedback, thus contributing to the flow of knowledge in an organisation (Chen & Huan, 2022, p. 531).

The research findings are squared with the body of knowledge on the justification or reason for collaborations and networking in the public sector. The converges are mainly in areas of stakeholder management, best practices, and resource combination. However, the slight difference between the results and the literature is the lack of explanation on categories of motives of collaboration and networking as disclosed by the results.

In substance, the study findings are that there are common grounds, reasons, and basis for SOEs to collaborate and network, which are into two categories, and the most common reason for collaboration is to implement projects, consumer education and feedback. The results also uncovered an additional reason for organisations, particularly SOEs, to the network by virtue of being a member state or association of the intergovernmental organisation, which is additional to the literature.

- **SOEs Interaction Methods**

The methods and mechanisms that SOEs use to connect and stay in touch with similar organisations in the sector are significant in this study, and it emerged as the third theme. The intention was to capture methods that are commonly practiced by SOEs to network and collaborate with the intention of gaining knowledge in this sector of organisations. Additionally, it was to discover if any knowledge discovered during the network and collaboration was known or if it is just sensing and seizing of opportunities for knowledge as per dynamic capabilities (Teece & Linden, 2017). During this theme, the results are two-fold. Firstly, the results indicate that there is an annual SOE forum; it cannot be described as a platform for collaboration and knowledge creation. The participant claimed that “the forum is mainly a sports event and recreation activities for SOEs it is not mandatory hence. Secondly, this forum is not a proper fit for knowledge exchange and transfer; hence, it cannot be regarded as a platform for networking and collaboration among the public second.

To this end, it is evident that SOEs in Namibia have no dedicated or predefined platform that is devoted to for organisations to share knowledge, best practices and feedback about each other’s operations or services. This finding is quite worrisome, considering that many of the SOEs are established as organisations for basic service delivery, and in the era of dependence on knowledge, peer feedback and inputs are of paramount importance. With this finding, it is clear that there are SOEs that have effective service delivery, and on the other hand, there is another group of them that are struggling. This finding ties in with the participant's recommendation for enhancing collaboration and coming up with proper mechanisms to establish a platform.

An overwhelming finding suggests that it is necessary for the information-based economy for SOEs to have a design platform where SOEs can come together each year for deliberation and sharing of best practices centered around seamless service delivery in public sectors. The results suggested that examples of physical platforms, virtual platforms and other available tools such as e-libraries are mainly for this sector. The participant recommendation tied in with the literature indicates that private institutions interact through virtual platforms Hock-doepgen et al., (2021, p. 695).

As per the findings, less emphasis was placed on the meetings and websites as forms of gaining insight into other SOEs information and best practices. The outcome of the results is grounded in the fact that the SOEs are mainly government-owned, and over 70% of them are into basic service delivery.

Literature in Chapter 2 indicates that organisations that are in sectors normally set up dedicated groups and platforms to share information related to their sector (Peple et al., 2022, p. 510). The interaction and regular collaboration between organisations in a similar sector of common course are vital to building capacity build and, to an extent, for resources consolidation (Ferraris et al., 2021); hence this agreed with the participant's expectation for SOEs to have a dedicated platform for networking and collaborations.

- **Conclusive Findings for Theoretical Categories 1**

The discovery of this theoretical category suggested that SOEs, like any other organisation, they do collaborate and network with several types of stakeholders. In discussing the results in relationship to the literature, the gaps identified required adjustment and literature review. The finding is overwhelming and characterised by huge similarities between the themes of this theoretical group. On the other hand, the discussion noted a gap that may be filled in the body of knowledge with regards to:

- An additional reason for organisations, particularly SOEs, to network by virtue of being a member state or association of the intergovernmental organisation is additional to the literature.

The finding also shows that:

- SOE collaborates with a myriad of stakeholders, including clients, the government as a shareholder, banks (both commercial and central bank), developmental partners, and suppliers.
- The results characterised the reasons for collaboration into two major groups, namely, the stakeholder relationship and management motive and the statutory obligation that required such network and collaboration.
- There is no dedicated platform for SOEs in Namibia.

6.2..2 Theoretical Group 2: Knowledge Flows

Knowledge flow is the second theoretical category of the study. This concept aimed at providing an understanding of the networking and collaboration that was established in the theoretical category 1 results in or contributed to the knowledge that flows in the business/SOEs. According to Hock-doeppen et al. (2021, p. 695), knowledge flow collaborations "refers to the knowledge exchange and creation process that occurs

when individuals or organizations engage in collaborative activities or network relationships with key partners and customers."

In comparison to this study, the knowledge flows are vital complements of an organisation given that knowledge becomes a powerful dynamic capability of every organisation. Participants discussed how engagements and collaboration between SOEs and other organisations or individuals contribute or result in technical ability, best practices feedback, inputs, and contribution of novel information to SOEs. One participant stated that networking and collaboration are the next big thing for organisations to gain constructive feedback on organisation service with suggestions or recommendations for organisations to change. Knowledge flows as a theoretical category is made up of one theme.

- **Types of Stakeholder Inputs Contribution**

The types of stakeholder inputs are yet another theme that emerged during the interview with participants. After the study established that organisations do receive inputs from stakeholders, it was imperative to understand the area of inputs and contributions; hence is not surprising that this theme emerged. The finding indicates that the inputs received by organisations are triangulated around service delivery, policies, and project implementation, as well as the improvement of legal frameworks.

Results indicate that the organisation sent their employee to take part in different workshops, training or activities that can be regarded as collaboration, and this activity involves an exchange of knowledge and innovation that may benefit the organisation. Furthermore, on an annual and quarterly basis, organising host meetings with clients and stakeholders, from which clients give information and feedback to organisations on how they can improve and up their games. These findings are strong; there is no doubt that they point to the fact that organisations collaborate in different ways, and surely this collaboration and networks allow the flows for knowledge in SOE.

All participant agreed that networking and collaboration contribute to knowledge flows in their organisations. The findings, in detail, indicated that SOEs receive feedback from their customer reading their services. This information or feedback is considered knowledge because it assists organisations in improving their business model according to the customer or client preference. Through this study, it also becomes evident that network and collaboration contribute knowledge and inputs in the area of policy development and law reforms. Given that SOEs are mainly organisations that implement government policies and laws, it is concluded that these legal frameworks

and policies form the basis of SOE mandate and similarly defines their services delivery; hence, for the SOEs receiving inputs and contribution on how to implement, adjust and an enhance the policies is a significant finding to this study.

The finding of this study is not different from Hock-Doepgen et al. (2021) opinions about the SMEs that are captured in the literature review. In essence, it is a general understanding across all sectors, whether private or public, what collaboration they are involved in results in a flow of knowledge being created. However, since Hock-Doepgen et al. (2021) study was toward the private sector, this research confirmed that much of the knowledge created in the public sector is not planned; it is a result of sense and seizes opportunities and only those organisation that village may pick it and benefits. Additionally, the findings of this aspect is that in SOEs, the knowledge extract from networking and collaboration are typical in forms of feedback of contribution based. The inputs are related to improve sever delivery, systems, and changes of legal frameworks different from private sector that share knowledge on new product development Ferraris et al. (2021, p. 295).

The type of stakeholder input contribution many participants demonstrated the overwhelming inputs that they received from their partners, collaborators, and stakeholders. The evidence is strong that these inputs and contributions are related to SOEs ways of doing or conducting business, particularly in service delivery. According to the participants, the inputs are in areas such as legal frameworks, policy review, digitalisation, system improvement, and upgrades.

6.2..3 Conclusive Findings for Theoretical Group 2

The Findings of this theoretical category suggested that, indeed, the knowledge flows into SOEs from networking and collaborations, and it cuts across different areas such as knowledge regarding service delivery, law reforms and, to an extent, policy implementation.

In particular, the finding also shows that:

- SOE benefits from the knowledge stream through collaboration and networking.
- The flow of knowledge from networking and collaboration are in areas of law reforms, police implementation and service deliveries, as opposed to the private sector, which also deals with product innovation.
- Knowledge flows from collaboration are not always priorities, and it is not always known that collaborations will lead to knowledge acquisitions.

- SOEs should collaborate and enhance their networking capabilities to benefit and build their dynamic capabilities in intangible resources.

6.2..4 Theoretical Group 3: Knowledge Management

In the previous sections on two theoretical groups, an understanding was established that organisations collaborate and network in indeed, they received inputs that they consider as knowledge from the collaboration and networking. Knowledge management as a dynamic resource of organisation comes in by providing a better vehicle for competition and adaptability in response to environmental changes (Chen et al., 2022a), and by utilizing knowledge management practices, organizations can effectively leverage their knowledge resources and stay ahead of the competition (Hock-doeppen et al., 2021). This section will deal with the aftermath, basically on how the knowledge obtained is managed in such a way that it will be used and deployed properly to benefit the organisation Lane et al. (2021, p. 1218).

It is paramount to understand the methods and mechanisms that are in place to manage and record the inputs received. Knowledge management includes recording, storing, and ease of retrieval of information for later use (Tsai et al., 2022, p. 433). This study reveals that SOEs have weak or no defined mechanism to manage knowledge as it flows in organisations. This theoretical group is represented by one theme only, Internal management of input received and is considered here in detail.

- **Internal Management of Input Received**

Internal Management of inputs is yet another theme that emerges during the analysis of the results. It aims to look at procedures used for knowledge formation, organization and storage, knowledge sharing, knowledge transfer, and knowledge implementation, which include having a knowledge-oriented leadership style, knowledge repositories, and infrastructure; this is relevant for the management and control of an organization's intellectual property. (Pepple et al., 2022, p. 510).

In terms of the internal management of the inputs, feedback or knowledge received through networking and collaboration, the study investigated the organisation's method or culture of handling and managing the inputs upon received from the stakeholder. The investigation encompasses the steps involved during and after collaboration to ensure that the information is well captured and nothing is lost in the process. Ferraris et al. (2021, p. 712) suggested that for information to be a resource or capability of an

organisation before it is used, it depends on the manners that an organisation adopts to store and manage such knowledge. With the same view as Ferraris et al. (2021) is Pepple et al. (2022, p. 510), who reasoned that knowledge that is acquired and not stored, recorded or preserved is nothing to an organisation because the significance of knowledge and information is embedded in its accessible whenever is required and a given time

The majority of participants expressed the understating of the importance of managing the inputs and constitutions; they explained in detail the rationale behind managing the feedback. The findings indicated that the importance of managing knowledge in organisations promotes accessibility and utilisation; they also indicated that it encourages an innovation culture and awareness in any organisation.

When it comes to the avenues available to organisations, first, the finding indicated that organisation shares organisations via email which are commonly referred to as internal communication regarding any collaboration meeting or conference, but they do not share detailed report on the subject matter. This is done merely for awareness and to keep the employee in the loop. Secondly, findings suggest that when employees or staff member stated meeting or conference outside, they prepare what is normally called the back-to-office report, but this report is not shared with all the people in the organisation; this does not promote access and sharing of information or knowledge in an organisation according to Di et al. (2021, p. 221).

Based on the results, SOEs have no proper or defined methodology that will ensure that all new knowledge or information that the organisation acquires through any means are stored and shared in the organisation. This is disturbing because valuable information that might be groundbreaking to the organisation's capabilities will go missing. Also, this hampers creativity and innovation in the organisation because employees have no access to the past, even for them to build on and propose new suggestions according to the trends in the sector.

Furthermore, the findings show that organisations have no platforms for looking back to inputs or feedback that was provided to digest it and utilise it to the benefit of the organisation. In the way of improvement, results suggest that organisations may develop a repository or implement a physical or digital library, where information such as suggestions, recommendations from stakeholders or reports by employees after attending a forum or training can be systematically sought and access to all employees in the originations.

Literature indicates that the management of knowledge in organisations is an integral part of building organisations capabilities, and there are sundry methods and mechanisms available to store knowledge in an organisation Chen et al., (2022b, p. 1140), starting with platforms such as in electronic format, reports and printed documents Tsai et al., (2022, p. 433) which is similar to with the research finding.

Since the findings indicated that SOEs have no predefined platforms to share knowledge, it is vital to draw inspiration from the private sector. The most used method in the private sector is through a meeting or digital platforms such as Google Drive, shared folders and email Hock-doeppen et al., (2021, p. 695). These wide range of mechanisms are vital for organisations to have as they ensure a fashionable manner to store knowledge, and the method that organisations choose should promote the accessibility and sustainability of knowledge storage. Chen et al. (2022b, p. 1140) mentioned that in a digital era, platforms to store knowledge are a lot but not limited to flash compact disks, external drives, physical files, and office libraries. The ability of an organisation to store knowledge is directly proportional to its ability to acquire knowledge; this is because stored knowledge can further be enhanced and developed into new knowledge and technical capabilities (Chen & Huan, 2022, p. 520).

In summary, having a proper mechanism in place to manage knowledge in SOEs is important not just for organisations but also for employees. The evidence is clear that SOEs have no dedicated platforms or libraries, be they physical or electronic libraries, to share information that is obtained from networking and collaboration. The management of information knowledge is directly propositional to the organisation's ability to innovate and change the way they do business; hence, the result suggests the implementation of platforms such as physical files and office libraries or repositories of information that relate to the organisation.

- **Conclusive findings for theoretical Group 3**

It is established that information sharing is very important both for private and public institutions. As a dimension of knowledge management, knowledge-sharing in organisation promote creativity and innovation. It was concluded that the innovation can be of any kind, including business model innovation. The research findings suggest that SOEs understand the importance of information sharing, but the methodology that is placed to ensure that information and knowledge are shared effectively was assessed. The study concluded that SOEs do not have dedicated internal platforms to share knowledge among their employees. Furthermore, the study indicates that the current situation in SOEs, of not managing the knowledge effectively, has a negative

impact on the organisational ability, particularly its power to innovate and improve its business operation sustainably.

In particular, the finding concluded that:

- Internal management knowledge is visual for building capabilities.
- SOEs have no proper methods or mechanisms to manage knowledge internally.
- The organisation's rate of innovation and creativity is directly proportional to its ability to manage and share knowledge with its subjects.
- There are a number of digital and physical platforms that organisations may use or deploy to promote sustainable management of information, such as a digital library or repository, physical room for all reports and Google Drive with maximum access by all.

Discussion for Research Sub-Question 2:

How do these knowledge streams from network collaborations contribute to business model innovation in the public sector?

Research sub-question 2 is systemically expected to be building on research sub-question 1. It was aimed at underacting from a practical point on how the knowledge that was obtained through collaboration and networking enables or improves organisation capabilities that influence its rate of innovation towards the way they are interacting with its client or its services delivery mechanisms. As discussed in Chapter 2, Hock-Doepgen et al. (2021)

6.2..5 Theoretical Group 4: Business Model Innovation

The fourth and last theoretical category of the study was focusing on the Business Model Innovation. A Business Model is the backbone of every business and organisation regardless of business activities (Tallman et al., 2018) because it provides an ecosystem for organizations to interact with consumers and vendors (Agarwal et al., 2021). According to Teece, the business model "describes an architecture for how a firm creates and delivers value to customers and the mechanisms employed to capture a share of that value" (Teece, 2018, p. 40). Simply, it refers to how a firm delivers its products and services to consumers (Sjödín et al., 2020). It is integral to this study to ascertain whether the knowledge obtained from networking and collaboration was essential and sufficient to influence organisations to innovate and improve their service delivery and wider business model. This theoretical group is described and represented

by two themes: the impact of stakeholder inputs and its impact on a business model. Here below, each theme is described in detail according to the findings.

- **The impact of stakeholder inputs**

This theme digs deep into the substance of inputs and contributions received from collaboration and networking. The foundation was to determine if it is worth it to collaborate or not by weighing the value and the importance of the contribution that comes from this networking in relation to the SOE's mandate and responsibilities. The impact of the inputs received was mainly meant to understand the importance and significance of information in relationship to the enhancement of organisation capabilities. All participants indicated that collaboration and networking indeed birth relevant input and useful contributions that will assist the organisation in the development to deliver the services effectively. The study outcomes on the impact of information or input received were triangulated around the abilities to influence the governing laws, policies and service delivery, which are core and at the heart of every SOE (Limbo, 2019, p. 20).

The study concluded that the inputs received by SOEs from collaboration and networking with a group of stakeholders such as suppliers, banks and inter-governmental organisations contribute to valuable inputs to the organisation. The vitality and importance of inputs were because this information is not just mere data or feedback but were characterised as valuable and timely knowledge to organisations, which then justification of it being impactful and purpose driven. The inputs were described as knowledge by the participants because some of the inputs are novel and technical, enhancing the organisation's technical know-how. The understanding to label the input from networking and collaborations as knowledge and a determining factor of its valuableness to an organisation is linked to Cui et al. (2020) ideology, which describes knowledge as an individual's know-how within their intellectual capacity that developed, nurtured and enhanced.

Completely the findings were that knowledge is characterised as technical know-how, particularly in the digital ceremony where knowledge is a catalyst of creativity and innovation. The understanding that information will help and enable the organisations to know their sector better proposed new changes to its business model. Additional findings were grounded on new knowledge as capabilities innovate and create new solutions. The results indicate that since organisations will be well informed about the trends and drivers that shape the market, they will be in a better position to respond accordingly and by itself is a dynamic ability that all organisations wish to have given

the uncertain and volatile environment.

The participant also mentioned that since the information received is sometimes a kind of feedback from clients and stakeholders, in its form is viewed as a peer review or evaluation of organisation services and operations, which is fundamental to every organisation. Their understanding is that when the organisation's services are reviewed and evaluated by users, it positions organisations in a better position to set a new course of action and improve according to the market and demand, particularly by adjusting and innovating the business model.

The findings of this study agreed with the literature presented in Chapter 2 to a certain degree. The agreement is attributed to the fact that networking and collaboration contribute valuable information to an organisation, which also influences its organisation's capabilities (Hock-Doepgen et al., 2021). Since this study focused on the public sector, it feels that the gap in the public sector also receives valuable information from networking and collaboration in addition to (Hock-Doepgen et al., 2021) findings of the private sector. Additionally, this study discovers another finding, which is an extension of the literature. The finding is that the significance of the information received can be not only rated to be important in relation to knowledge capability but also to the fact that some information is indeed assessment and evaluation of business operation. All in all, the finding is vital in building SOE capabilities to innovate and create new solutions.

- **Impacts on Business Model**

After understanding the importance of information to the organisation, it was rationally to further study its implication and relationship of the knowledge to the business model. The Business Model is defined by Latifi et al. (2021) and Lim & Morris (2023) as an operating system where technology and creativity are integrated for better value creation and the importance of this aspect of this study.

The findings of this theme are built upon the foundation of the first two theoretical categories. The findings were established related to the flow of creation, flow, and management of knowledge. This section of the study discusses the consolidated findings in and their impacts to organisations business model innovations. In principle, all participants indicated that the input and knowledge generated and flows from the collaboration and networking stream immensely influence the changes and adjustment to SOE architecture of doing business. Given that the significance and importance of knowledge received was established and framed toward the influence on policy

systems and law legal framework, the findings on how the knowledge received is impacting SOE business model innovations are discussed in the same fashion.

Participants mentioned that knowledge that flows in SOS helps organizations to improve their system for company registration. This is with the understanding that the capability of organisations is enhanced. The majority of participants indicate that both clients and suppliers of the organisations provide useful information that SOEs use to shape and enhance their information communication and technology infrastructure, rolling them out and shortening digital processes with the goal of providing fully self-service digital processes and seamless services to clients. This is our powerful conclusion on how SOEs utilise knowledge flow from networking and collaboration to innovate and enhance the business model. The interesting part of this is that as much as it is concluded that SOEs have no proper forms of mechanisms to manage knowledge, they still reach the end reason one could only think that the outcome could be better if knowledge were optimally shared, dissemination and managed property.

Another overwhelming finding was that the knowledge flows and, subsequently, management triggers organisations to change the operating and governing law, particularly to fit the digital environment. A good example shared was when the meeting with stakeholders recommended amendment to Company Law first to allow digital certificate signatures and to improve the statutory filing system. Results further explained that the law is the foundation of every business process, and any improvement to it is an obvious change and shape of business interaction with customers. These findings are substance to the importance of knowledge flows in the public sector, with a clear demonstration of how knowledge management can influence business model innovation.

The third finding on this theme was around the policies and creativities in the public sector. The outcome of this study points to the fact that many factors, including the availability of information and infrastructure, drive creativity and innovation in the public sector. The public sector and catalyst to business model innovation. Participants indicated that since employees are exposed to training and workshops outside organisations in many instances when they involve strategic partners, they acquire new novel ideas that help an organisation to improve their policies and business innovation and new seamless business operations.

The next findings were attributed to the benefits of strategic partnership. A perfect example of a strategic partnership shred was when intergovernmental organisations implemented a system for the administration of intellectual property for free. The

system enabled stakeholders to file and employees to examine applications on the system, eliminating the manual application. This example helped organisations to reduce the turnaround time for registration and filling.

In addition, participants narrated many good examples that may be regarded as innovations toward business model, including the implementation of cue management systems that was born because of benchmarking with sister organisations and collaboratively inputs and guidance from clients. Another example is the introduction of enterprise resource Planning that is being implemented upon the demand of clients with a collaborative effort of suppliers and local banks. In a nutshell, many innovations in business models were either implemented or enhanced due to the knowledge from networking and collaborations. There is much power in collaborative networking, and the benefits therein will be determined by the maximum benefit an organisation may leap from networking and collaboration.

In terms of the literature, the findings related to the relationship between knowledge management and its impact on the business model are similar to those of the private sector, according to Hock-Doepgen et al. (2021) study. However, this study reveals that apart from the internal and external mechanisms that allow knowledge flow into SOEs, there is yet another dimension of networking and collaboration which have an impact on business model innovation, which was paramount and central to this study. Knowledge from a network is said to be knowledge acquisition through interaction with various stakeholders (Lane et al., 2021, p. 1217).

6.3 Summary of findings

In this research, it is established that SOEs in Namibia collaborate with a myriad of stakeholders for various reasons. Similarly, these interactions or networking were tested, and it was found that they yield valuable inputs and feedback to organisations which are termed as knowledge to SOEs. The research suggests that these inputs are paramount to organisations; hence their management as knowledge to organisations was as well established. The study found that SOEs have no pre-defined mechanism for management knowledge from networking and collaboration, which later translated into a loss of valuable input to organisations. This discovery was said to hamper the building of organisational capabilities. While considering the mechanism for knowledge management, it was determined in this research that knowledge sharing is a maker or breaker of knowledge acquired or flow, which is supported Chen et al. (2022), Hock-Doepgen et al. (2021) and Lane et al. (2021).

Lastly, the overwhelming conclusion is that SOEs, as much as they do not have

methods to manage knowledge, the knowledge flows from networking and collaboration still and indeed positively information organisation creativity and innovation capabilities which results in innovation and reshaping of business models. At this point, one can only imagine what the maximum benefits would be if there were proper mechanisms and methods to manage knowledge effectively. Knowledge management, therefore, has an influence on business model innovation in SOEs. Therefore, the objectives of this research study were met.

The findings of this study contribute to the body of knowledge as far as the knowledge streams from networking and collaboration. It is known clear the SOE ca build the knowledge capabilities by sensing, seizing and transforming opportunities that are available in collaboration in order to influence and change their business model innovation

CHAPTER 7: CONCLUSION

7.1 Introduction

The research objectives of this study were to explore the flow of knowledge from network collaboration as a dimension of knowledge management and its contribution to the business model innovation of public sectors in Namibia. The reach is an extension of the study by Hock-Doepgen et al. (2021) to broaden the understanding of how knowledge management influences business model invitation. The ultimate goal was to fill the gap in the body of literature, particularly in the context of public institutions; there is a dearth of research in these areas, particularly in their application to public sectors (Agarwal et al., 2021).

This research established an extent to which knowledge management, particularly knowledge that flows from networking and collaboration, impacts the SOE's ability to innovate and reshape the business model. Again, a business model is agreed to mean the organisation's architecture of delivering its services or products to the consumer.

The results of this research study are presented in Chapter 5 according to the participants and the theoretical groups. Additionally, the results discussed in Chapter 6 make a meaningful sense and possibility to answer the research questions. The discussion of the results was done in relation to the literature review, as presented in Chapter 2. The overall objective was to have a systematic approach to finding answers to research questions logically. In this section, the main findings of the study are presented with reference to the objectives of the study. Moreover, the chapter shared the study limitations, recommendations, and possible areas for future research.

7.2 Principal Findings

While other studies have explored various dimensions of knowledge management, such as knowledge acquisition, application, and creation, there has been limited investigation into the knowledge that results from network collaboration, which provides organizations with platforms to acquire knowledge from sources outside their immediate environment (Hock-Doepgen et al., 2021, p. 695). Additionally, the existing research has primarily focused on upper-income countries and profit-making organizations (Hock-Doepgen et al., 2021; Latifi et al., 2021), leaving a significant gap in the literature on the role of knowledge management in the public sector.

The public sector's setting and operations are far different from those of the private sector on the ground that the public sector is more of a regulated environment;

henceforth, the finding from the private sector is not one size fits all. Thus, exploring this body of literature in the context of Africa, particularly in Namibia, offered a unique opportunity to understand the applicability of existing theoretical constructs to the public sector and the degree to which external knowledge, mainly through network collaborations, influences an organisation's business model innovation.

This section provides the findings of the study in relation to the theoretical concepts and their possibility to answer the research question, as presented in Chapter 3. The general question was how knowledge streams from the network and collaboration contribute to business model innovation in the public sector. To answer this question, this research was qualitative, and about 14 respondents were interviewed to gain in-depth answers to the research question. The section also drew conclusions and findings in response to the research question in collaboration with the participant's response.

- **Network and Collaboration**

Network and collaboration are important dimensions of knowledge management because they allow the organisation to access novel knowledge that may be considered as knowledge to an organisation (K. Chen & Huan, 2022; Hock-Doepgen et al., 2021). Building relationships with stakeholders in a sector is key as an aspect of organisational management because it enables an organisation to enhance and improve its technical and dynamic capabilities, which places them in the best position in the market.

In understanding the rate of collaboration and networking in the public sector, the study established SOE practices of networking and collaboration with myriads of stakeholders such as clients, vendors, governments, and intergovernmental organisations. It is also understood that these collaborations and networking are backed by four grounded reasons: the stakeholder relationship and management, the statutory obligations, partnership on co-hosting or implementing projects and lastly, multilateral agreements that require such network and collaboration.

The research also adopted an inward-looking to understand the mechanisms available for SOEs to exchange knowledge with each other, given that they are in the same sector and, in most cases, are owned by the government. The finding concluded that SOEs are operating in silos and have no dedicated platform or a predefined forum to exchange knowledge and best practices which in turn may help other SOs to innovate and create solutions.

Overall, it is found that SOEs do network and collaborate, which gives them an additional dimension of knowledge management apart from the traditional dimension of knowledge creation, acquisition, application and sharing. Similarly, these findings were significant in answering half of the research, such as question 1. This finding supports Hock-Doepgen et al. (2021) on the different types of networking and collaborations

- **Knowledge Flows from Networking and Collaborations**

According to Hock-Doepgen et al. (2021), networking and collaboration are another stream of knowledge flow in SMEs; hence, it was imperative to ascertain this understating in the area of the public sector. Looking at the types of contributions and inputs received through networking and collaboration, it is established in this research that this platform can increase the organisation's capabilities immensely. The response was examined thoroughly, and it found that networking is a powerful source and stream of knowledge flow in SOEs.

Findings of this theoretical category suggested that, indeed, the knowledge flows into SOEs from networking and collaborations, and it cuts across different areas such as knowledge regarding service delivery, law reforms and, to an extent, policy implementation. The results further find out that although this stream contributes to knowledge in SOEs, organisations do not prioritise this stream, and it is not always known that collaborations will lead to knowledge acquisitions.

It is concluded that networking collaboration contributes to knowledge flow in SOEs, which in turn improve organisations capabilities to innovate toward their business model.

- **Knowledge Management in SOEs**

It was discovered that SOEs do not have a defined mechanism for storing, recording and retrieving of knowledge that flows into the business. This situation, in a way, weakens SOE's ability to build a sustainable, dynamic capacity through knowledge preservation.

Literature confirms the significance of knowledge management from internal and external sources on the business innovation of SMEs Hock-Doepgen et al. (2021), which are private sectors. Knowledge management is managing knowledge by utilising it to develop new inventions and processes (Hock-Doepgen et al., 2021; Leoni et al., 2022). In a rapidly changing business environment, "acquiring and developing knowledge has become a crucial resource for organizations to address the challenges

they face" (Piñeiro-chousa et al., 2020, p. 476). Knowledge management is a critical component of this research, and it was tested in detail.

This research tested whether the knowledge from networking and collaboration could influence the business model in the public sector. This research findings ascertain that knowledge management is an important component for SOEs in building technical know-how. During the literature review in Chapter 2, it could be understood that knowledge management includes record, codification and retention of knowledge in an organisation for future use (Leo 2020, p. 107).

Furthermore, it also refers to the sharing of information within all legs in an organisation to enable ease of retrieval and build capacity. Furthermore, the body of knowledge discloses that information could be stored in digital format or physical library to allow employees wider access to information, which in turn allows creativity and innovation. However, the findings in this study concluded that SOEs have no effective predefined mechanisms to record managed knowledge that comes from networking and collaboration. The information or contribution that is regarded as knowledge is sometimes not written but contained in the heart of individuals who were part of the collaboration. This finding reveals that information can easily get lost or not be used to build innovation capability in SOEs.

Chen et al. (2022b, p. 1140), in their study titled "Building data driven dynamic capabilities to arrest knowledge hiding: a knowledge management perspective," concluded that knowledge sharing is a catalyst for innovation in organisations; the ponder on the influence of shared data that drives organisation innovation by utilising knowledge. The findings of this study are that knowledge collected from networking and collaboration is not shared properly in SOEs. Employees are not well informed of new trends and drivers that shape their industries, which diminishes their ability to innovate and create a business model. BY extension, this finding then means that SOEs do not make optimal use of the knowledge from networking and collaboration to build innovation capabilities in their organisation.

- **Knowledge Management and Business Model Innovation**

Knowledge management was concluded to be a vital component of SMEs, particularly in modern economies (Hock-Doepgen et al., 2021). It includes the creation, acquisition, sharing and application of information to build knowledge capabilities in an organisation (Ferrerias-Méndez et al., 2021). It enhances the organisation's ability to find solutions to industrial problems, deliver effective services and provide a competitive and dynamic service to the audience (Leo, 2020).

The implications for knowledge management on a business model for SOEs are developed from the understanding that knowledge is a resourceful tool for organisations. When organisation utilise knowledge, they become innovation orientated, which lead to better delivery of services. This understanding, to a certain extent, was proven in the private sector (Hock-Doepgen et al., 2021). However, it could not be entirely generalised to the public sector given the difference in setup and mandates and also that it did not cover the knowledge from networking and collaboration. Therefore, this study explored the contribution of knowledge management from networking and collaboration on business model innovation for SOEs in Namibia. Firstly, it is a different sector, and in different countries, which are middle-income countries, and thirdly, it focuses on networking and collaboration as a dimension of knowledge management only. The contribution of knowledge management to business model innovation of SOEs in Namibia is concluded and discussed as follows.

Networking collaboration as a knowledge management dimension allows the flow of knowledge into SOEs. It is the findings of this study that SOEs interact with different stakeholders, a platform that allows them to gain access to networking and collaborations. These platforms further allow new ideas, feedback, and contributions to be shared or discussed related to services delivered to an organisation. It is also through this platform that organisations turn to assess where they are doing well and where they need to improve; hence, some scholars refer to it as peer review or assessment and evaluation of SOEs services by stakeholders. On its own, it is another form of knowledge acquisition as knowledge flow in an organisation for further utilisation. This supports the ideology of Lane et al. (2021) on knowledge acquisition and application.

Knowledge management promotes and enables an organisation to build a dynamic and innovative culture. Upon the knowledge flows in the organisation, it is prudent that it is managed, and it includes recording, storing, and sharing in such a way that it promotes accessibility to all subjects and employees in the organisation. It is with the understanding that when an employee is well informed, their innovation capabilities are enhanced, and this can be innovation related to a business model. SOEs gain valuable information that they can use to adjust their business model. However, it was concluded in this study that SOEs have no defined methods or mechanisms to manage and share knowledge from networking and collaborations, which, in a way, diminishes the organisation's capabilities to contribute to business model innovation.

Knowledge management contributes to business model innovation. Although SOE does not have proper mechanisms to share knowledge in an organisation, it appears that the little quarter that tent know about the inputs and constitution, they used it wisely to benefit the organisation. Findings reveal that SOEs change their business model because of the information they receive from clients, suppliers, and other stakeholders. Many examples were shared on how knowledge flow from the network and collaboration enhances the business model, which translates into a positive contribution of knowledge management toward the business model. This research contributes to the aspect that knowledge management contributes to business model innovation in the public sector.

7.3 Research Contribution

This research contributes to the aspect that knowledge management contributes to business model innovation in the public sector. The study contributed to the body of knowledge in the following ways.

- Added to the reasons that necessitated collaborations and networking in SOEs.
- The study establishes a direct correlation between an organization's rate of innovation and its capacity to effectively manage and share knowledge with its stakeholders.
- This research contributes to the existing body of knowledge by highlighting the significance of networks and collaboration as a distinct stream of knowledge flows within organizations.
- The influence of knowledge capabilities on the BMI in SOEs
- The methods for managing and recording inputs and sharing information that is considered knowledge in an organisation.
- Also, it contributed by highlighting that knowledge from networking and collaboration are in areas of law reforms, police implementation and service deliveries, as opposed to the private sector, which also deals with product innovation (Hock-Doepgen et al., 2021).

7.4 Recommendations for Management

Based on the study's findings, the following strategies and recommendations to improve and enhance knowledge management from networking and collaboration streams to yield maximum benefits for SOEs can be considered.

- SOEs are recommended to establish a dedicated online networking platform for sharing information and best practices in the sector.
- This study recommends that SOEs should collaborate and enhance their networking capabilities to benefit and build their dynamic capabilities in intangible resources.
- SOE should enhance its internal mechanism to manage and share knowledge by implementing digital and physical platforms:
 - Implement cloud-based storage solutions, such as Google Drive, to facilitate convenient access to information, particularly for remote or dispersed teams.
 - Create dedicated physical knowledge rooms within each organization to house crucial documents, reports, and reference materials.

7.5 Limitations of the Study

The limitation of this study was detailed discussed in Chapter 4 on methodology, but that as it may, specific limitations were discovered as follows:

- This study was narrow as it focuses on knowledge derived from network collaboration within the public sectors of Namibia. It does not explore the full spectrum of knowledge management dimensions and their potential contributions to innovation, leaving room for future research in diverse sectors.
- The research's scope is further limited by concentrating on the public sector in Namibia without distinguishing between its different categories. The public sector comprises various divisions, including commercial and budgetary entities, each with distinct priorities and approaches to knowledge management. These distinctions were not fully addressed, which could potentially affect the applicability of the findings to specific subsectors.
- Access to a broader range of SOEs was constrained, and the study's findings are limited by the inability to include a more comprehensive and diverse representation of these enterprises. As a result, the research may not fully capture the unique knowledge management practices and innovation dynamics within the entire landscape of SOEs in Namibia.

7.6 Suggestions for Future Research

Based on the limitations of this study and the findings, it is recommended for future study to focus on the following:

- Future research can delve into the various dimensions of knowledge management beyond network collaboration. Investigating how other knowledge management approaches, such as knowledge creation, storage, and dissemination, impact innovation within the public sector
- To account for the differences within the public sector, researchers can focus on specific subsectors such as commercial and budgetary and determine if networking collaboration as knowledge management influences business models differently based on the type of SOEs.

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APPENDICES

A1: ETHICAL CLEARANCE

GIBS

**Gordon Institute
of Business Science**
University of Pretoria

Ethical Clearance Approved

Please be advised that your application for Ethical Clearance has been approved.
You are therefore allowed to continue collecting your data.
We wish you everything of the best for the rest of the project.

[Ethical Clearance Form](#)

Kind Regards

This email has been sent from an unmonitored email account. If you have any comments or concerns, please contact the GIBS Research Admin team.

A2: CONSENT FORM

INFORMED CONSENT



Dear Sir/Madam

In partial fulfillment of my MPhil course, I am conducting research on the flow of knowledge via network collaboration and its contribution to business model innovation (focusing on Namibia Public Enterprises). I am trying to find out more on how the knowledge from networking and collaboration with other organizations and developmental partners contributes to the changes and adjustment of the business model. Our interview is expected to last about an hour and will help us understand how the knowledge arising from network collaborations contributes to business model innovation. **Your participation is voluntary, and you can withdraw in advance or at any time during the interview without penalty. Please sign in the space below if you want to participate in the interview and consent to the following:**

- The interview is to be recorded.
- Verbatim quotations from the interview may be used in the report, provided they are not identified with your name or that of your organization.
- The data will be used as part of a report that will be publicly available once the examination process has been completed, and all data will be reported and stored without identifiers.

If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher name:

Email: **22030396@mygibs.co.za**

Phone:

Research Supervisor name:

Email:

Phone:

Signature of participant: _____ Date: _____

Signature of researcher: _____ Date: _____

A3: INTERVIEW GUIDE

Participants Name: _____

Organization: _____

Position: _____

Date: _____

Start Time: _____ End time: _____

Thank you for agreeing to participate in this research. Your time and contribution to this study are very much valued.

The study is titled: **The Flow of Knowledge via network collaboration and its contribution to business model innovation.**

I would like to talk with you to explore and gain insights into your experience working in Public Enterprises. Your valuable input will be used solely for academic purposes and this research study. Rest assured that all information you provide will be treated with the utmost confidentiality. Your identity will remain confidential, and any findings reported will ensure your privacy.

Before we begin, I kindly ask you to review and sign the consent letter. Additionally, I wanted to confirm if you are comfortable with me recording our conversation. This will help me accurately capture the details and ensure nothing is missed during the interview. If you have any concerns or questions, please let me know.

Demographic data Questions

1. How many years of experience do you have working for a state-owned enterprise?
2. What is your highest level of academic qualification, and what field of study did you specialize in?
3. What is your current position including your role and responsibilities within your unit?

RQ1

How does the knowledge arising from network collaborations assist your organisation to make changes or adjust your business model?

Introductory Questions

4. Kindly share with me the types of stakeholders/partners that you work with or engage with as an organisation?
5. From your experience, do these engagements with stakeholders or partners result in inputs/feedback that you consider as knowledge within your organization? Please explain your answer.

Body Questions

6. From your own experience and knowledge in your role, what are some of the examples of inputs or contributions from these engagements with stakeholders and partners?
7. In your opinion how important or valuable were these inputs or contributions to the organization?

Conclusion

8. What are the methods that your organization use to manage, record, and store the inputs/feedback/ contribution from these engagements.

Sub question 1

What are the key mechanisms and channels through which knowledge streams arise from network collaborations in your organisation?

9. What are the common methods or modes that public sector organization use to share information, input/feedback, and best practices? How effective are these?

Sub question 2

How do these knowledge streams from network collaborations assist public sector to make changes or adjust their business model?

Introductory question

10. Based on your experience, share with me practical example of how input feedback/information from the engagement with stakeholders helped your organization to improve or adjust their business model? Please explain your answer

11. Is there anything that you wish to add?

Thank you very much for your participation.

End