Gaps and Challenges in Supply Chain Management in South African Government Departments: the role of implementing an Integrated Financial Management Systems

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A RESEARCH REPORT SUBMITTED TO THE FACULTY OF COMMERCE, LAW AND MANAGEMENT, UNIVERSITY OF THE WITWATERSRAND, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

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ABSTRACT

The research aimed to identify and analyse the current gaps and challenges faced in supply chain management (SCM) within South African government departments. The descriptive case study research design was chosen utilizing a qualitative method approach, which was informed by the nature of the research problems under consideration. Semi-structured interviews were used to delve deeper into the topic and reveal patterns in opinions and thought patterns.

The findings of the study or the identified challenges that are associated with corruption, lack of supplier knowledge, risks and challenges identified; implementing an IFMS to address challenges in government supply chain management; familiarity with available IFMS in the market; factors that should be considered when evaluating IFMS and technological infrastructure and upgrades.

Eleven interviews were conducted as part of the study, comprising a diverse group of participants representing various National Government Departments. The selection of participants was guided by the aim of capturing various experiences and perspectives related to supply chain management within government departments. A purposive sampling approach was employed, targeting individuals with significant experience and expertise in SCM.

Overall, this qualitative research study contributes to the existing literature by providing valuable insights into the complex dynamics of SCM in South Africa government departments. The findings of the study can inform policymakers, government officials, and stakeholders involved in SCM processes, assisting them in identifying areas for improvement and making informed decisions regarding the implementation of an IFMS.

Keywords: *Integrated Financial Management Systems, Government Departments, Supply Chain Management, Challenges, Gaps.*

DECLARATION

I, Lerato Matokoloho Tshabalala declare that this research report titled "*Gaps and Challenges in Supply Chain Management in South African Government Departments: the role of implementing an Integrated Financial Management Systems",* is my own work except as indicated in the references. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the University of the Witwatersrand, Johannesburg. I have not submitted this report before for any other degree or examination to any other institution.

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Lerato Matokoloho Tshabalala

Signed at Pretoria on 29 February 2024

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DEDICATION

To my beloved daughter Lesedi,

This MBA research is not just a culmination of academic endeavors, but a testament to enduring bond between a parent and a child. There were countless evenings when I had to trade playtime for textbooks, and weekends where syndicate meetings took precedence over family outings. Know that every missed bedtime story and every postponed adventure was not in vain, but rather a testament to my unwavering commitment to your future.

This endeavor was never just about personal advancement; it was about paving the way for your dreams to soar higher than ever before. Each page turned, each lesson learned, was a step closer to building a better tomorrow for us both. As you witness my dedication to continuous learning and growth, may it ignite the fire within you to pursue your own aspirations relentlessly.

So, my dear daughter, as you read these words, remember the time I sacrificed being by your side to invest in our shared future. Let is serve as a beacon of inspiration, reminding you that with determination and perseverance, no dream is too distant to achieve.

Love

Mom

LIST OF FIGURES

LIST OF TABLES

Contents

CHAPTER 1

1. INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The use of digital devices has significantly increased because of the Covid-19 pandemic, which has been driven by social norms promoting social isolation and the implementation of widespread lockdown measures. People and institutions globally have been compelled to adjust their lifestyles and work practices to accommodate these new circumstances (De, Pandey, & Pal, 2020). Nearly all regions have implemented lockdown because of the pandemic growth, ending gathering places for people, such as universities, schools, malls, temples, offices, airports, and railway stations (Khan & Faisal, 2020). Due to the lockdown, most people are now using the internet and internet-based services to interact, communicate, and perform their jobs from home. As a result of the worldwide lockdown, more people are using networks and information systems, and usage patterns and habits have drastically changed. Employees are adjusting to the new "normal" as office work moves to homes, meetings are conducted online, and new work patterns emerge. Most organizations—whether in business, society, or government—have gone through these changes. Due to the suddenness of the changes, organisations and people had little time to plan, prepare, and put new setups and arrangements in place, which prompted them to make modifications, try new things, and find answers that weren't previously conceivable (De, Pandey, & Pal, 2020).

Information and Innovations in information communication technology (ICT) have changed how government agencies run a business. The government has utilized several information systems (IS) due to this development's capabilities (Gcora & Chigona, 2019). Government agencies in developing nations are progressively looking into techniques and frameworks to update and enhance public financial management. For instance, one of the most popular financial management reform practices has been the introduction of the IFMIS, which seeks to encourage efficacy,

efficiency, accountability, openness, data security, and thorough financial reporting. An IFMIS's scope and functionality differ from country to country, but it denotes a significant, complicated, and purposeful reform effort (Hendriks, 2012).

The Republic of South Africa's government has been deeply concerned about the ongoing poor performance in financial management due to a lack of timely and accurate information for decision-making at all levels of government, including national, provincial, and local, for a very long time (Treasury, 2018). Adopting an Integrated Financial Management System (IFMIS) will streamline financial operations, improve management and sourcing practices within the government, and provide standard, accurate, and real-time financial statements (Njau & Kinoti, 2020).

1.2 Context of the study

South Africa, like many other countries, faces numerous gaps and challenges in SCM within government departments. These challenges may include inadequate procurement processes, limited transparency, poor coordination among stakeholders, and suboptimal resource management. These issues can lead to delays, increased costs, corruption, and compromised service delivery (Sibanda , Zindi, & Maramura, 2020). To address these challenges, the implementation of an IFMS has been proposed as a potential solution. The IFMS integrates financial management functions, such as budgeting, accounting, and reporting, into a comprehensive software system. It aims to streamline processes, enhance transparency, and accountability, and optimize resource utilization.

The context of the study is significant due to the unique challenges faced by government departments in South Africa, such as historical inefficiencies, complex regulations, and the need for improved service delivery to address societal needs. Understanding these challenges and exploring the potential of an IFMS as a mediating tool is essential for enhancing Supply Chain Management practices and optimizing the utilization of resources within government departments.

1.3 Problem statement

The purpose of this study was to investigate the gaps and challenges SCM within South African government departments and examine the mediating role of implementing an IFMS. Supply chain management (SCM) is a fundamental aspect of public management that plays a critical role in acquiring and distributing goods, services, and infrastructure projects to fulfil the requirements of the public (Sibanda , Zindi, & Maramura, 2020). The delivery of public services, however, is becoming less efficient and effective due to growing gaps and difficulties in SCM. These weaknesses and difficulties in SCM may be bridged using an IFMS or an Enterprise Resource Planning (ERP). This study focuses on the gaps and challenges in SCM in South African government departments, including lack of transparency in procurement processes, lack of standardized processes, and inadequate financial management systems. The lack of transparency in procurement processes often leads to corrupt practices and mismanagement of public finances. Standardized processes enhance proper coordination among stakeholders in SCM (Sibanda , Zindi, & Maramura, 2020).

Financial transversal systems will enhance and bring about more favorable working relationships and conditions, which were previously lacking in some organizations, such as health and safety. Departments must therefore make sure that any recently established financial cross-systems are well understood by workers and that the right training techniques are used without compromising the quality of services (Makhaye K. J., 2020). Governments began experimenting with their operation methods from the beginning of the 1980s (Shimange & Pillay, 2023).

Undoubtedly, how we communicate, live, and work has changed because of the Fourth Industrial Revolution. The connections between people, corporations, and governments and the environments in which they function have undergone significant economic changes because of the information and technology (IT) age. Nowadays, e-finance and environmental quality are important concerns that have garnered a lot of research attention. One study created a model with several control factors, such as the energy usage, both renewable and non-renewable. (Elheddad, Benjasak, Deljavan, Alharthi, & Almabrak, 2021).

Despite these projects regularly being hampered by delays in their execution, the government realised the need to reinvest in improving existing transversal systems and to develop or create new digital platforms that could benefit from the affordances afforded by more recent technologies. (Abrahams & Burke, 2019). In 2005, an initiative by the National Treasury (NT), the DPSA, and the State Information Technology Agency (SITA) to enhance the management of administration processes in the public sector in the domains of Financial Management (FM), Human Resource Management (HRM), (SCM), and Business Intelligence (BI) has received Cabinet approval for implementation. (Abrahams & Burke, 2019)

Financial transversal systems will enhance and bring about more favourable working relationships and conditions previously lacking in some organisations, such as health and safety (Makhaye, 2020).

1.4 Research objectives.

- To identify and analyse the challenges and risks in SCM within government divisions.
- To examine the potential mediating role of implementing an IFMS in addressing the identified gaps and challenges.
- To investigate available IFMS in the market.
- To assess the readiness of the technological infrastructure in Government Departments

1.5 Justification/rationale of the study

There are a lot of gaps and difficulties with SCM in South African government departments (Sibanda , Zindi, & Maramura, 2020). For example, non-compliance to SCM policy and regulations, inadequate planning and budget-demand alignment, and inadequate and inconsistency to risk management irregularities in SCM. Irregularities like breaking rules pollute the procedures these departments use to purchase goods and services, a lack of accountability and transparency, corruption, and inefficient service delivery. These inconsistencies are linked to the need for more adequate systems, skills, and oversight mechanisms (Hendriks, 2012).

To identify ideas and tactics that can help encourage the deployment and usage of the system, the study seeks to close the information gap on the issues preventing the implementation of IFMS or ERP in the South African national government department.

The study sought to raise awareness about the importance of effective SCM practices in government departments to promote transparency, accountability, and efficiency. By highlighting the role of IFMS in addressing SCM challenges, the research aimed to inform policymakers and practitioners about potential solutions for improving government procurement processes. By supplying reliable information promptly for financial planning and decision-making, an IFMIS is used to enhance the formulation and performance of budgets (Hendriks, 2012). According to Hendriks (2012), Several features of a well-designed IFMIS can be utilised to spot improper payments, fraud, and theft. Computerised reference of identification numbers for fraud, automated asset inventory and equipment acquisitions for theft detection, automated cash distribution procedures, patterns of suspicious activity, automated identifying phantom employees, and so on are a few examples (Hendriks, 2012).

1.6 Delimitations of the study

The scope of research is limited to National Government Departments around Pretoria, Gauteng. The delimitations are due to the fact that Pretoria houses a large number of government departments and therefore it impossible to undertake detailed research in all of them. This being the case, in order to maintain depth and at the same time manageability, this study will narrow the scope and select five government departments to be covered in-depth. This choice limits the subject scope, intensifying the research to specifics like the underlying organizational systems, occurrence of challenges and strategic management operations within particular departments.

Moreover, limiting the study to the areas of national government departments in Pretoria gives a point of view of their perspective and helps to understand their role in the formulation and enactment of national policies. This perspective opens up an avenue for exploring the specific problems and gainful endeavors of these divisions in line with the general themes in governmental system functioning. Consequently the research is conducted on a selected group of departments which help to see the base

cause of problem, that will facilitate in providing actionable suggestions and recommendations which can bring about efficient, effectiveness, and overall government departments.

1.7 Operational definitions

The following operational definitions apply:

Supply Chain Management (SCM) has been conceptualised based on a systems method for regulating the informational flow, resources, goods, and services from suppliers to warehouses and final consumers who are the public (Sibanda , Zindi, & Maramura, 2020).

An Integrated Financial Management Information System is a system of information that monitors and summarises financial events. It promotes proper management reporting, tactical decisions, fiduciary responsibilities, and the production of auditable financial accounts. The computerisation of public financial management processes with the help of an integrated system for financial management, from budget creation and execution to accounting and reporting, is a basic description of an IFMIS (Hendriks, 2012).

Enterprise Resource Planning (ERP) consists of various core functional modules (manufacturing, human resources, sales, and finances), which have been integrated by a vendor and may subsequently be customised to match each customer's specific requirements. (Shimange & Pillay, 2023).

1.8 STRUCTURE OF THE RESEARCH REPORT

The following outlines the structure of the research:

Chapter One: Introduction and Overview

The purpose of this chapter is to give a summary of the research. The background, statement of purpose, research objectives, research questions, justification for the study, study delimitations, and operational definitions are all included in this chapter.

Chapter Two: Literature Review

The relevant material and information for research will be covered in depth in Chapter Two. This literature review will include the investigation of the available Information Management Systems in the market and the challenges and risks government departments face when it comes to handling their finances. This chapter will focus more on investigating the feasibility of using various service providers to provide government departments with integrated management systems for thirty-six months.

Chapter Three: Research Methodology

This chapter describes the chosen research design and provides justifications for the design's environment, study population, data collection method (sampling), reliability, and validity. Also noted are the statistical techniques that were utilised to examine the data.

Chapter Four: Findings

The information from the questionnaire is presented in this chapter so that it can be interpreted. The study's findings are in paragraphs and individual participants participant quotes to support the themes. the significant conclusions. Significant findings are also discussed in light of the study's goals and literature review.

Chapter Five: Discussion and Conclusion

The primary subject of this research study is covered in this chapter, and recommendations are offered to the various government departments on IFMS. Finally, conclusions for additional research are suggested.

CHAPTER 2:

2. LITERATURE REVIEW

2.1 INTRODUCTION

This chapter aimed to provide a comprehensive understanding of the existing literature surrounding this topic, highlighting the theoretical frameworks utilised to analyse these issues. Chapter two delved into the gaps and challenges in supply chain management within South African government departments, with a specific focus on the role of implementing Integrated Financial Management Systems (IFMS).

The literature review explored the fundamental concepts of supply chain management and the importance of effective financial management systems within this context. Drawing upon theoretical frameworks such as the Technology Acceptance Model and Systems theory, the chapter will analyse the underlying principles that influence supply chain dynamics and financial management practices within government settings.

2.2 SOUTH AFRICAN GOVERNMENT OVERVIEW

The constitutional democracy of South Africa is comprised of three branches: the executive, legislative, and judicial. The National Assembly, the lower chamber of Parliament, elects the President, who serves as the head of the executive branch and is assisted by the National Treasury. The National Council of Provinces, comprised of 90 members chosen by the provincial legislatures, is the highest body in Parliament. The President, Deputy President, and Ministers appointed by the President make up the Cabinet, responsible for carrying out government plans and initiatives. The Constitutional and other High Courts and Magistrates Courts form the independent judiciary.

South Africa is divided into nine provinces, each with its provincial government. These provinces are responsible for a range of service delivery functions, including housing, healthcare, and education, and they each have their legislative bodies. The national government of South Africa is committed to promoting social and economic advancement, improving the situation of marginalised groups, and addressing issues of inequality, poverty, and unemployment. Key priorities of the administration include ensuring that all

citizens have access to high-quality healthcare and education, fostering economic growth and job creation, combating crime and corruption, and addressing climate change and environmental sustainability. The National Treasury is obligated to provide comprehensive financial management consulting services to the larger government, which includes monitoring the implementation of the national budget in compliance with the Public Finance Management Act (PFMA) and other relevant financial regulations, such as the Treasury Regulations (Thokoa, Nadioo, & Herbst, 2022). The National Treasury also promotes responsible, efficient, equitable, and sustainable financial management practices that contribute to social progress, economic growth and development, good governance, and improved living standards (Thokoa, Nadioo, & Herbst, 2022). In addition, the SCM regulations aim to ensure value for money when using municipal funds by the key outputs and results listed in Municipalities' Integrated Development Plans (IDPs) and Service Delivery Budget Implementation Plans (SDBIPs) (Sibanda, Zindi, & Maramura, 2020). The Office of the Chief Procurement Officer, a branch of the National Treasury, is responsible for managing the public supply chain in South Africa (Mafini, 2016). The South African Constitution also acknowledges the significance of supply chain management, stating that careful administration of this role is intended to produce six key advantages (Republic of South Africa, 1996), including:

- Providing high-quality services, which in turn improves the welfare of South African citizens.
- expanding and maintaining infrastructure to grow the economy;
- lowering costs for goods and services;
- encouraging innovation throughout the economy;
- accelerating e-learning through the acquisition and use of relevant technologies in educational institutions and
- lowering the cost of doing business with the government, which is beneficial to business.

The Preferential Procurement Policy Framework Act of 2000, the Municipal Finance Management Act of 2003, and the Broad-Based Economic Empowerment Act of 2003

were all passed by the South African government to give the country's public SCM initiatives some direction (Mafini, 2016).

The capacity of the leadership team to source resources through the creation of a request to the national government and the sound use of the resources drives performance within the study context of government agencies, institutions, and departments. Government departments occasionally employ resources in investment portfolios to generate income to carry out their mandates and goals. (Njau & Kinoti, 2020).

Many governments globally are currently in urgent need of digitising their public services. This transformation is impacting businesses and promoting citizen engagement and economic development, as reported by Alverenga et al. (2020). It is crucial for businesses, whether public or private, to undergo digital transformation due to digitalisation's pervasive and rapid influence. However, the primary reason for the slow adoption of this change in organisations is the of need for more knowledgeable and educated personnel. While there have been significant advancements in many public administration services, the full potential of digital adaptation has yet to be realised. The digital government landscape constantly evolves to reflect the government's pursuit of cutting-edge technological solutions in various spheres and the potential impact on decision-making. The ability of the National Treasury to adopt and use Integrated Financial Management Information Systems (IFMIS) in financial management will depend on how useful the system is anticipated to be in helping the government agency achieve its goals and objectives. The national treasury expects IFMIS to enhance the standard of financial reporting and budgeting, leading to its adoption and use (Njau & Kinoti, 2020).

The National Treasury is likely to install IFMS and other systems if other government organisations and departments do so. because government agencies are connected and can readily share financial data and statements, implementing the Public Financial Management Act is made simpler (Hendriks, 2012).

Auditing can track every transaction and financial resource use, which enhances performance. It also reduces instances of corruption, fraud, theft, and misappropriation of public funds (Njau & Kinoti, 2020).

2.3 SUPPLY CHAIN MANAGEMENT IN THE SOUTH AFRICAN PUBLIC SECTOR.

Supply Chain Management (SCM) in the South African public sector plays a pivotal role in the delivery of goods, services, and infrastructure to citizens, businesses, and other stakeholders. It encompasses a complex network of activities, processes, and relationships that span from procurement and logistics to distribution and disposal. In recent years, SCM in the public sector has undergone significant transformation driven by legislative reforms, technological advancements, and a commitment to promoting transparency, accountability, and socio-economic development (Ambe & Badenhorst-Weiss, 2012).

Historically, South Africa's public sector SCM has been shaped by its unique socio-economic and political context, including the legacy of apartheid, which entrenched inequalities and marginalized certain segments of the population (Watermeyer & Phillips , 2020). In response to these challenges, the South African government has implemented a comprehensive legislative framework aimed at promoting inclusivity, fairness, and efficiency in procurement processes.

Key legislative instruments, such as the Preferential Procurement Policy Framework Act (PPPFA) and the Broad-Based Black Economic Empowerment (B-BBEE) Act, have been instrumental in promoting the participation of historically disadvantaged individuals, small and medium-sized enterprises (SMEs), and black-owned businesses in government procurement (National Treasury, 2003). These policies have not only sought to redress past injustices but also stimulate economic empowerment and foster sustainable development.

However, despite these efforts, the South African public sector faces numerous challenges in SCM, including corruption, inefficiencies, skills shortages, infrastructure deficits, and compliance issues (Mantzaris, 2017). These challenges not only undermine the effectiveness of SCM processes but also erode public trust in government institutions.

In response to these challenges, there has been a growing emphasis on leveraging technology to enhance transparency, streamline processes, and combat corruption in public sector SCM. Initiatives such as e-procurement platforms, electronic tendering

systems, and supply chain analytics are being increasingly adopted to improve efficiency and accountability (Ambe & Badenhorst-Weiss, 2012).

Moreover, collaboration and partnerships between government entities, private sector suppliers, civil society organizations, and international development partners are critical for advancing SCM objectives in the South African public sector (Mofokeng & Chinomona, 2019). By working together, stakeholders can share knowledge, resources, and best practices to address common challenges and drive continuous improvement in SCM processes.

2.4 CHALLENGES THAT HINDER SUPPLY CHAIN MANAGEMENT

*2.4.1 **Non-compliance to SCM policy and regulations***

Government departments must adhere to the SCM policy and devise a unique SCM plan for their respective departments. Compliance with the policy, however, is often hindered by various factors, including the lack of necessary SCM skills and competencies, inadequate regulatory culture, and inappropriate practices such as failing to use a competitive process for quotes and bids, misusing the preference points system, lack of bid committees, and appointing unqualified suppliers (Sibanda, Zindi, & Maramura, 2020). These practices can also lead to the rejection of bids for invalid reasons, the application of incorrect procurement processes, extending the validity period, using the wrong limited bidding process, lack of control and procedures for handling bids, and inadequate documentation of bid information on the bid register, among others.

2.4.2 Inadequate planning and budget-demand Alignment

Cost-effective procurement relies on professional skills to ensure that buying requirements are precisely identified, appropriate contract strategies are designed and well managed, and opportunities to purchase the best deal at the right time and price are available. Since it describes the decision-making process that enables departments to procure at the appropriate time, at the right place, and the right cost, the demand management process is essential to every procurement process.

organizations organisations still need better planning and tying demand to budget, though however many government organisations still need better planning and tying demand to budget. This could result from restricted abilities and talents (Ambe & Badenhorst-Weiss, 2012).

2.4.3 Inadequate and inconsistency in risk management/irregularities in SCM

Managing risks is yet another difficult task. The article's findings show that the environment is deficient in internal controls and the application of risk mitigation techniques through the efficient use of SCM policy and procedure. Corruption and fraud are the results of this. SCM is hampered by fraud, corruption, and other administrative errors inside governmental organisations (Ambe & Badenhorst-Weiss, 2012). The issues affecting SCM in government may have their roots in a need for knowledge of the idea and its indispensable relationship to long-term quality service delivery, human capital development, and related socioeconomic progress (Ambe & Badenhorst-Weiss, 2012).

2.4.4 Inadequate monitoring and evaluation of SCM

Implementing SCM properly requires monitoring and assessment. Government entities are put in a difficult position to give effect to or execute SCM as required by the policy because inadequate monitoring and evaluation are linked to the lack or weak existence of a controlled environment. As a result, deviations or non-compliance are either not noticed at all or are noticed after the fact. Government players involved in procurement have spent millions of Rand in ways against the law. The national and provincial administrations and their affiliates have racked up illegal, unapproved, pointless, and wasteful expenditures that are against the law. SCM controls over information technology, human resource management, capital asset management, and performance reporting all have flaws. Most governmental organisations need flawless audits (Sibanda , Zindi, & Maramura, 2020).

2.4.5 Ethics and conflict of interest

Conflict of interest and ethics have a significant impact on SCM implementation. According to the report, some chief financial officers exercise great power, and other senior officials are not properly consulted. Although the National Treasury Guide to

Accounting Officers prescribes a standard approach to SCM procedure, given the independence of the accounting officer's financial management and the lack of application, departments frequently used their discretion to procure in a way that would be appropriate for a particular time. This led to a need for more standardization and differentiation in methods (Ambe & Badenhorst-Weiss, 2012).

2.4.6 Lack of proper knowledge, skills and capacity

The deployment of Supply Chain Management (SCM) is highly dependent on adequate capacity, represented by suitable structures and skilled, experienced personnel. Sadly, the level of expertise and competence among SCM personnel in certain government organisations fall well below expectations. Although many SCM actors in the South African public sector have participated in numerous training and workshop sessions, they still need to gain the necessary proficiency to implement SCM effectively. The registry is only sometimes complete, making it difficult to assess the completeness of tender documents for government entities. Inadequate governance of also results from the lack of ability and expertise to manage procurement processes (Ambe & Badenhorst-Weiss, 2012).

2.5 TRANSVERSE SYSTEMS IN THE GOVERNMENT DEPARTMENT OF SOUTH AFRICA

The legislative mandate requires every government agency, to establish an SCM unit and put SCM into practice (Ambe & Badenhorst-Weiss, 2012). The general administrative systems needed by all national departments and the provincial departments of all nine provinces are referred to as transverse systems (National Treasury, e-Procurement in South Africa, 2023), which include:

2.4.1 The Basic Accounting System (BAS)

After evaluating different systems, the National Treasury implemented the Basic Accounting system (BAS) at all National and Provincial Departments using FMS (Financial Management System). This enabled users to become accustomed to the online transaction recording and reporting system in a Windows environment and permitted the National Treasury to unify all government financial systems onto a single platform (National Treasury , 2023).

The implementation of a "Standard Chart of Accounts" (SCOA) that met with Government Financial Statistics was another requirement placed on departments (GFS). The adaptability of the BAS code structure completely supported this. The transition to the new Chart of Accounts, which supports the consolidated reporting of Expenditure and Revenue per financial year in line with Section 32 of the Public Finance Management Act, was taken advantage of as a chance by the implementation (PFMA Act 1 of 1999) (National Treasury , 2023).

2.4.2 THE LOGISTICAL INFORMATION SYSTEM (LOGIS)

According to the National Treasury (2023), the logistic information system (LOGIS) was necessary to ensure a fair, equitable, transparent, and cost-effective system for the government. The system was designed to provide affordable, effective, and efficient services and was divided into two components: LOGIS Mainframe and Online Portal. To provide and handle acquisition (procure and pay), government departments used LOGIS, which was integrated with BAS to provide real-time commitments and pay advice. The Departments also entered asset operation and repair data using LOGIS. Its present format was created in 1998 to meet government management and provisioning needs related to controlling stock and movable assets (National Treasury, e-Procurement in South Africa, 2023).

The department depended on LOGIS to handle its purchasing procedures and provide prompt finance services. Because the LOGIS is adaptable and flexible, government departments can use it to assist their procurement process. The process of acquiring the appropriate material, in the proper amount, for delivery at the appropriate time and location, from the appropriate supplier with the proper service and at the appropriate cost is known as procurement (National Treasury, e-Procurement in South Africa, 2023).

2.4.3 The Personnel and Salary System (PERSAL)

Since 1990, an integrated Human Resource (HR), Personnel, and Salary System, more commonly referred to as PERSAL, has been available to support developing and applying specific HR policies. All departments of the federal and provincial governments utilise the PERSAL technology. The Office of the Public Service

Commissioner initially designated the system as a Personnel and Salary System. National Treasury, the system's owner, implemented the system, and its budget includes expenses related to its upkeep (National Treasury, e-Procurement in South Africa, 2023).

The systems indicated above have several issues, including but not limited to the following:

- Challenges in implementing uniform norms and standards across systems and operations.
- Weak inherent systems of interoperability and data aggregation that seriously jeopardise operational integrity and the production of management information.
- Challenges in coordinating the implementation of new laws and regulations.
- Outdated technologies are nearing the end of their useful lives.
- System fragmentation and data integration challenges make it difficult to gain economies of scale.
- The implementation of new functional needs resulting from new laws or regulations is challenging.
- Ageing technology's support and maintenance expenses are rising.
- Service delivery cannot be expanded using new technologies like web services.
- It is challenging to interoperate with other e-Government systems (Hendriks, 2012).

2.5 COMPARISON OF ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS

Many businesses and organisations now rely on ERP systems to gather business data and information from various departments in a single database, enabling staff members and managers to produce reports that streamline business operations. Cloud computing is expanding and beginning to spread into more and more businesses. More companies can have faith in the cloud thanks to the most important and tried and true cloud systems. Traditional ERP systems are hosted directly in each company, where the company maintains them. Since the popularity of cloud computing has increased, cloud apps are starting to be created (Elbahri, et al., 2019).

ERP systems provide organisations a comprehensive range of benefits and capabilities, facilitating information sharing and transfer across all roles and departments, and aiding in attaining organisational objectives (Hadidi, Al-Rashdan, Hadidi, & Soubhi, 2020). By consolidating shared transactional data from various sources within a company, an ERP system minimises information duplication and ensures data integrity (Mughal, Bhatti, Noman, & Ahmed, 2019). A multitude of ERP systems are available and offer solutions to large businesses, with the top five firms accounting for 50% of the industry and exhibiting fierce competition (SAP 24%; Oracle 12%; Sage 6%; Infor 6%; Microsoft 5%) (Mughal, Bhatti, Noman, & Ahmed, 2019).

2.5.1 SAP

SAP has sold manufacturing software (systems, applications, and goods in data processing) for more than 35 years. This system was the first three-year system to be released on the market, and its success allowed SAP to rise to the top of the list of businesses with a focus on the creation and design of ERP systems (Hadidi, Al-Rashdan, Hadidi, & Soubhi, 2020). SAP offers the ERP solution for large enterprises (Les). This includes an organisation's primary commercial operations, which range from logistics (sales and marketing, Inventory administration, project control, logistics delivery, and quality management) and Fiscal (financial accounting, business accounting, economic supply chain management) to Human Capital Management (Training, payroll, E-recruiting) and Corporate Support (Travel Management, enterprise management). Depending on the business, a SAP system's delivery and maintenance costs can differ significantly (Mughal, Bhatti, Noman, & Ahmed, 2019).

2.5.2 ORACLE

Oracle ERP and Enterprise Performance Management Cloud offer a solid, innovative, and validated platform for businesses of all sizes that want to compete in the digital world. There is only one platform for the entire business, which consists of industry standards and current best practices: Oracle. It handles accounting, financial planning and analysis (FP&A), revenue recognition, risk management,

regulation, enforcement, acquisition, project planning, tax reporting, fiscal closing, and more (Mughal, Bhatti, Noman, & Ahmed, 2019).

With its strong ERP capabilities and wide range of features and advantages, Oracle software has helped to establish itself as one of the most popular and up-to-date ERP systems available today. The Oracle software system cancan seamlessly integrate various components into a singular system for user convenience (Elbahri, et al., 2019).

2.5.3 Microsoft Dynamics

It is a Microsoft product designed for medium-sized to big businesses. The following business processes can be automated with the help of this cloud-based ERP system: sales, inventory management, bookkeeping, and purchasing. However, it only offers limited cross-platform support, including particular program features, operating systems, and servers. Additionally, the absence of some components and the interaction with third-party features make integration more difficult (Mughal, Bhatti, Noman, & Ahmed, 2019).

Data sharing and transfer are made easy by Microsoft Dynamics' ability to synchronize with various Windows applications. Because Microsoft Dynamics Marketing is built on the Windows substructure, deploying it takes much less time than alternative approaches. MD is suitable for large global industries because it speaks a variety of languages and works with a variety of various currencies. Despite all the strength research, no programming technique is error-free (Elbahri, et al., 2019).

2.6 Mediating role/benefits of implementing IFMS / ERP

Organisations Implementing an Integrated Financial Management System can enhance SCM in public sector organisations. The integrated financial management system enables standardised procedures while increasing transparency in the procurement process. The system allows for tracking all transactions across the supply chain, ending fraudulent procurement practices. Implementing an Integrated Financial Management System also improves financial reporting and budgeting accuracy, increasing budget transparency.

According to Mohlala (2020), system integration fosters coordination and interaction and improves organisational synergy. An integrated environment has interfaces across technologies and makes knowledge readily accessible to organisational staff members across different departments.

2.7 Theoretical framework

A theoretical framework is an approach or framework used to define a specific occurrence significant to the scope of an inquiry or investigation (Mohlala, 2020). A theoretical framework research makes the theory easier to understand or even better supports the theory. These theories were developed to provide justifications, make predictions, and clarify a study objective's meaning. A strong theoretical framework reveals the connections between variables most clearly related to a problem and identifies the key variables (Makhaye, 2020).

The study adopts the Technology Acceptance Model (TAM) and Systems theory to gain a comprehensive understanding of the challenges and gaps in supply chain management within South African government departments, particularly in the context of implementing integrated financial management systems. TAM helps to explore the individual-level factors influencing technology adoption, while systems theory provides a broader perspective on how these individual factors interact within the larger organisational and systemic context.

2.7.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), used in several research projects, has grown in importance in the literature on technology acceptance. Additionally, a recent systematic evaluation found that the use of TAM in educational technology adoption has demonstrated its usefulness compared to other theoretical frameworks (Salloum, Alhamad, Al-Emran, Monem, & Shaalan, 2019).

TAM comprises two theoretical constructs: perceived utility, which is defined as autonomy (the advantage for the user to use the tool for the intended purpose), and perceived ease of use, which is defined as competence (being effective in dealing with the environment where it is utilised). These are the primary factors that influence how

a system is used and foretell user attitudes or their propensity to utilise the system (Ngaka, 2022).

According to the definition, perceived usefulness is defined as "the degree to which a person believes that using a particular system (such as Epicor) would enhance his or her job performance." In contrast, perceived ease of use is outlined as "the degree to which a person believes that using a particular system would be free of effort (Ruth, 2018). In this study, TAM can be applied to understand how government officials and stakeholders perceive and accept the IFMS as a technological solution to improve supply chain management. TAM can help identify factors influencing acceptance or residence towards the implementation of IFMS, such as perceived usefulness and ease of use.

2.7.2 Systems Theory

Systems theory is a multidisciplinary theory that discusses the characteristics of complex systems in nature, culture, and science. It provides a framework for looking at and describing any collection of things that interact to achieve a specific outcome (Wambugu, 2019). It is essential to ensure harmony and synergy between the human resource, which acts as the primary resource that directs all other resources, and other instruments of the trade, notably current ICT, to meet the aims of office secretarial administration (Njonde & Kimanzi, Effect of Integrated Financial Management Information System on Perfoormance of Public Sector: A case of Nairobi County Government, 2014)

The multidisciplinary investigation of systems is known as systems theory. A system is a cohesive collection of components that are either naturally occurring or artificially created. Every system has boundaries that set its time and space, encompass it by and impact its environment, distinguish it by its framework and nature or purpose, and exhibit itself in how it operates. A system can be more than the sum of its parts in terms of its outcomes if it displays synergy or emergent behaviour (Wambugu, 2019).

Modifying one component of the system typically has anticipated ripple effect on the other components and the entire system. Positive growth and adaptation for self-learning and self-adapting systems depend on how effectively the system is adapted to its surroundings. Some systems primarily serve other systems by helping to maintain the other system and maintain the other system to avoid failure. Systems theory seeks to achieve optimum equifinality by methodically identifying a system's dynamics, limits, and circumstances as well as delineating principles (purpose, measure, methods, tools, etc.) that can be detected and applied to systems at every level of nesting and in every area (Wambugu, 2019).

2.8 Conceptual framework

A conceptual framework is described as a virtual or written product that describes the principal topics to be examined, the important concepts, components, or variables, and the presumptive relationships among them, either visually or in narrative form. (Wambugu, 2019). A conceptual framework is a diagrammatical research tool designed to help the researcher gain insight into the topic under investigation and convey this. In research, a conceptual framework is typically used to give potential action directions or present a preferred method of illuminating an idea or notion. Most academic research begins with a conceptual framework since it aids in defining the study question and objectives (Wambugu, 2019).

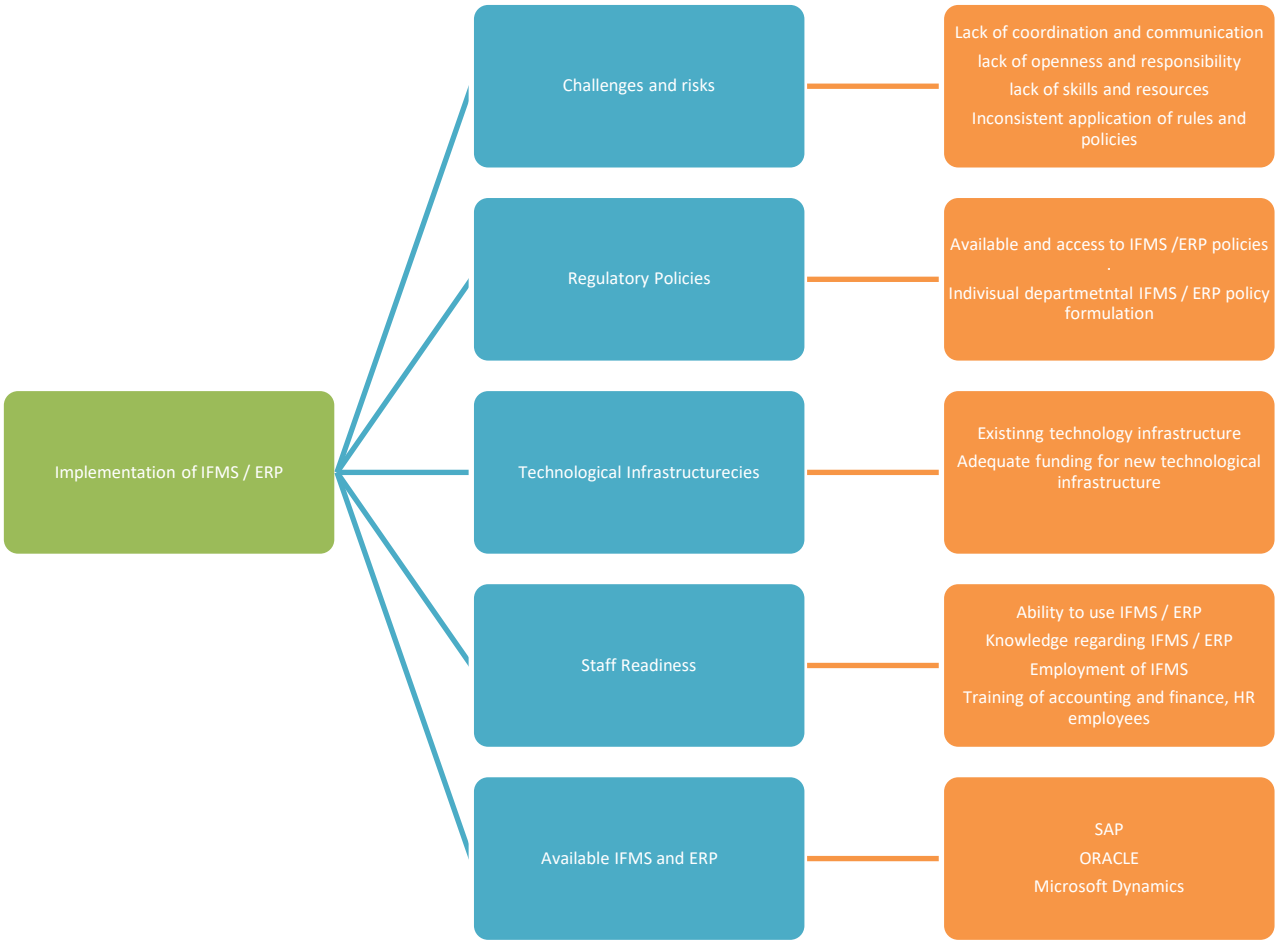

Figure 1: Conceptual Framework

Author: The researcher's work

2.9 CHAPTER SUMMARY

The primary goal of this study was to describe the obstacles to SCM) adoption in the South African public sector. In South Africa's public sector financial management reform initiative, the adoption of SCM takes centre stage. The government of South Africa has implemented SCM into their public procurement policy. The goal of SCM is to add value at every stage of the process, from the demand for goods or services to their acquisition, management of the logistics process, and lastly, disposal of the items or services after usage. Laws and policies serve as the SCM process' guiding

principles. The supply chain is comprised of responsibility, ethics, and fair transactions, as well as competition and equity.

Institutions in the public sector need help managing their supply chains. These difficulties can be mitigated by implementing integrated financial management systems. The successful deployment of IFMS depends on adequate budget allocation, human resource capacity building, and technical know-how. By enhancing openness, the use of these tools will improve supply chain management.

3. Research Methodology

3.1 Introduction

This chapter discusses the research methodology employed in the study and describes the research design, setting, population, target population, sampling and sampling techniques chosen, sample size and selection criteria, data collection process, data analysis, limitations, trustworthiness, and ethical considerations of the research. Research methodology is the study of how scientific research is conducted. A strategy for logically implementing different procedures to answer the research challenge in a systematic manner. The results of scientific inquiry and the process itself are better understood with the aid of methodology. Research methodology aims to explain and assess methodologies, shed light on their constraints and resources, make their presuppositions and outcomes clear, and relate their potential to the grey area at the "frontiers of knowledge" (Patel & Patel, 2019).

3.2 Research Approach

Qualitative research will be the primary research methodology used in this study to comprehend the topic in-depth and to acquire deeper insights. Exploration of complicated phenomena is made possible by qualitative techniques, which can produce rich and thorough data (Leko, Cook, & Cook, 2021). Qualitative methods allow for a deeper exploration of complex phenomena. In the case of studying gaps and challenges in supply chain management in South African government departments, qualitative methods such as interviews can provide insights into the nuances and underlying factors contributing to these challenges.

3.3 Research paradigm

A paradigm is a worldview or philosophical presuppositions established and made evident through ontological and epistemological viewpoints. The terms "epistemology" and "means of knowing relation while ontology refers to people's beliefs about what they know (social reality), a scientific phenomenon (Kawulich, 2012).

There are three widely used paradigms for philosophical research: positivism, interpretivism, and pragmatism. The positivist paradigm, which is connected to the quantitative method, holds that only one true reality can be understood by observation and experimentation (empirically). According to interpretivism, a phenomenon should be understood within a specific context by inquiry and examination, which is connected with qualitative approaches and asserts that reality is socially created, that there are numerous viewpoints or truths, and that there are multiple perspectives or truths (Mohlala, 2020).

The interpretivist paradigm emphasises understanding and interpretating individuals' subjective meanings and experiences (van der Walt, 2020) involved in the SCM processes. It recognizes the importance of social and cultural contexts in understanding gaps and challenges in SCM. The interpretive paradigm aims to explore multiple perspectives and construct knowledge through an iterative data collection process. The paradigm favours qualitative research methods such as semi-structured interviews, observations and document analysis. These methods allow for an in-depth exploration of the experiences, perceptions, and behaviours of individuals involved in SCM and facilitate a comprehensive understanding of the research (van der Walt, 2020).

Adopting an interpretivist research philosophy is well-suited for exploring the gaps and challenges in supply chain management within South African government departments, especially in the context of implementing Integrated Financial Management Systems. This approach will provide a rich, contextualized understanding of the issues, informed by the perspectives and experiences of those directly involved. The insights gained from this study will contribute to the development of more effective strategies for improving supply chain management and IFMS implementation in the public sector.

3.4 Research method

Qualitative research involves the examination of diverse phenomena, encompassing their characteristics, different expressions, contextual influences, and various perspectives through which they can be understood. However, it does not focus on determining their range, frequency, or establishing a direct cause-and-effect relationship" (Busetto, Wick, & Gumbinger, 2020). Therefore, investigating and understanding phenomena that emerge in the context of nature is of interest to qualitative researchers. Qualitative researchers examine objects in their natural environments to assess happenings in terms of the meanings people ascribe to them. (Boru, 2018).

Qualitative research differs from quantitative research in its subjectivity and relies on various data collection methods, particularly focus groups and individual in-depth interviews. This approach aims to provide explanations and allows for open-ended exploration. A limited number of in-depth interviews or focus groups are conducted with participants, who are encouraged to provide detailed responses to open-ended questions. The interviewer or group, facilitator, then analyzes and probes their answers to understand participants' perceptions, opinions, and emotions related to the topic or concept being discussed and gauge the level of agreement within the group (Motuba, 2014).

One of the key advantages of qualitative research is that it tends to focus on the "whys" of occurrences and can offer in-depth descriptions of participants' cognitive processes. (Boru, 2018).

Advantages and disadvantages of qualitative research

The following are identified as the advantages of qualitative research:

- The thick (rich) descriptions of participant experiences, thoughts, and feelings are produced using quantitative research methods, which also analyse the intentions behind the participants' activities (Opdenakker, 2006).
- Some contend that interpretivism, a qualitative research approach, offers a comprehensive understanding of the human condition in certain contexts.

- The interpretivism approach to research is regarded as an ideographic strategy that focuses on the analysis of specific situations or events and can comprehend the perspectives, meanings, and happenings of various persons.
- Qualitative research allows researchers to learn about participants' inner experiences and understand how meanings are shaped by and within culture.
- Participant observation, unstructured interviews, direct observation, and description recordings are some of the most popular qualitative data collection techniques.
- The framework of qualitative design (interactive method) is flexible since it may be built and rebuilt to a higher extent (Rahman, 2017).

The following are identified as the disadvantages of qualitative research:

- When conducting qualitative research, contextual sensitivity is occasionally overlooked in favour of meanings and experience (Opdenakker, 2006).
- Results from a qualitative approach may not be taken seriously by policymakers, and stakeholders typically use quantitative research in their investigations.
- A smaller sample size questions whether the research's findings can be applied to the entire population.
- It could be more challenging to evaluate and analyse data. With illusive data on one side and strict requirements for analysis on the other, qualitative research is a lengthy and difficult journey.
- Examining the instances requires much time, and there are only a few ways to the findings to a wider population (Rahman, 2017).

3.5 Population

The term "study population" refers to all components that may include people, goals, or subjects that fulfil the inclusion requirements. Individuals, groups, organisations, human products, and events or conditions make up the research population, also called the study objects (Makhaye, 2020).

3.6 Target population

Government officials who use financial transversal systems, including BAS and LOGIS, from the Department of Human Settlements, the Department of Women, Youth and Persons with Disabilities, the Office of the Public Service Commission, the Department of Transport and Small Business Development.

Officials who are involved in supply chain management, finance, asset management and IT.

3.7 Sampling

Sampling is seen to be a particularly effective method for assessing a community's traits and viewpoints. Researchers who need to be made aware of the restrictions imposed by various sample techniques run the risk of misusing this tool (Motuba, 2014).

Purposeful sampling will be utilized for this study. Researchers employ purposive sampling when they specify the types of participants or cases they must utilise in order to account for all characteristics that are predicted to be significant, owing to the literature, prior experience, or theory (Busetto, Wick, & Gumbinger, 2020). The participants will be selected based on the skills and expertise necessary for SCM at the National Department of Human Settlements. In terms of departmental representation, organisational hierarchy, and years of experience, strive for diversity. Snowballing sampling will also enable the participants to refer or recommend their colleagues in the same field to be interviewed or to be part of the research. The acceptable sample size for a qualitative sample is between 5 and 15 participants (Guest , Namey, & Chen, 2020).

3.8 Data collection methods

For qualitative research, information can be gathered from various sources, such as documents, historical materials, interviews, and so forth (Busetto, Wick, & Gumbinger, 2020). A semi-structured interview is undertaken in this study to gather qualitative data. This is supplemented by an examination of relevant documents that govern the

structure and behaviour of the bank, such as directives, legal codes, the country behaviour of the bank, such as directives, legal codes, the country's growth strategy, and other relevant materials.

3.8.1 Semi-structured interviews

Busetto et al, 2020. As "a casual exchange, a discussion with a purpose," define qualitative interviews". Interviews provide in-depth details on participants' experiences and viewpoints on a certain topic (Boru, 2018). Thus, it is ideal for this study to obtain rich and comprehensive information regarding market structure, effectiveness, laws, etc. from practitioners' perspectives. Interviews can be categorised based on their level of structure, ranging from highly structured formats like questionnaires to open formats such as informal conversations or autobiographical interviews. Semi-structured interviews, on the other hand, exhibit two key characteristics: the inclusion of open-ended questions and the utilisation of an interview guide or topic list that outlines the main areas of interest, sometimes accompanied by sub-questions (Busetto, Wick, & Gumbinger, 2020).

Interviews will be conducted with key stakeholders involved in SCM within South African government departments. These stakeholders may include supply chain managers, procurement officers, finance managers and IT professionals. The interview will be conducted in person and virtually in instances where a participant is not available for an in-person interview, with the participant’s consent. To ensure that the interview is documented, a tape recorder will be used to fully capture the participant's response.

Key participants in SCM within South African government departments will be interviewed. Supply chain managers, purchasing agents, financial managers, and IT specialists are a few examples of these stakeholders.

3.9 Research Instruments/data collection processes

Semi-structured interviews were conducted for the research. The research instrument will have the following components:

Semi-structured interview questions were used to explore the perspectives and experiences of key stakeholders involved in SCM and IFMS implementation. Questions will focus on understanding the current challenges, gaps, and issues faced by SCM, as well as the perceived role of IFMS in addressing these challenges. A detailed guide is attached as Annexure A.

Data matrix and coding systems were utilised to organise and synthesize the data, identifying common themes, patterns, and relationships.

3.10 Data analysis and interpretation

Thematic analysis and coding was employed to analyse the data collected from semi-structured interviews. The thematic analysis involved identifying patterns, themes and categories within data, while coding provided a systematic approach to organising and categorizing the data (Nowell, Norris , White, & Moules , 2017). Maguire and Delahunt (2017) detailed eight important steps in analysing and interpreting qualitative data:

Data transcription and familiarization: the researcher should transcribe the interview recordings and compile notes from semi-structured interviews. Then read and re-read the data to become familiar with the content and gain a holistic understanding.

Initial Coding: the researcher should start by conducting open coding, which involves identifying and labelling initial codes for meaningful data segments. Assign codes to significant statements, ideas, or concepts related to emerging codes and patterns that may not have been anticipated.

Codebook development: the researcher will create a codebook that includes definitions and descriptions of each code identified during the initial coding process. The researcher will ensure the codebook is clear and comprehensive and captures the essence of data.

Coding and categorisation: the researcher will systematically apply the codes from the codebook to the entire dataset, including interview transcripts and notes. Coded segments will be categorised into broader themes based on similarities, relationships and concepts that they represent.

Theme development: the researcher will identify overarching themes from the categorised codes. The researcher will look for patterns, connections and relationships within and across the themes, paying attention to both recurring themes and unique insights that shed light on the gaps, challenges and the role of the IFMS.

Data Exploration and Interpretation: the researcher will explore the relationship between themes and examine the data to understand the context and depth of each theme. Findings will be interpreted by connecting themes to the research objectives and relevant theoretical frameworks. The researcher will ensure the use of direct quotes, excerpts, and examples from the data to support and illustrate the identified themes.

Triangulation and Validation: the researcher should triangulate the findings by comparing and contrasting the results from different data sources, such as interviews, observations, and document analysis. The researcher will seek inputs from other researchers, peers, or stakeholders to validate the interpretations and ensure the trustworthiness of the study. Participants will also be allowed to review, check, and provide feedback on the findings of the analysis.

Reporting: the themes and findings will be summarised, the results will be organised into a coherent narrative, highlighting the identified gaps, challenges, and the potential mediating role of government departments that will be supported with relevant quotes from the data collected (Maguire & Delahunt, 2017).

3.11 Trustworthiness

Researchers employ trustworthiness as a means to persuade both readers and them that their research findings hold significance. Even those who may differ in their views regarding the underlying epistemology and ontology of meeting trustworthiness criteria are acquainted with these criteria due to their reliance on methodological justifications and strategies (Nowell, Norris , White, & Moules , 2017). There are four ways to warrant trustworthiness in qualitative research:

Credibility is how well the results correspond to participant experiences and the topic under study (Haven & van Grootel, 2019). To enhance credibility, the researcher will

use triangulation by collecting and analysing data from multiple sources (interviews, observations, document analysis) to ensure convergence and consistency of findings. The researcher will also engage in prolonged engagement with the data, spending sufficient time to immerse yourself in the data and develop a deep understanding of the context. To maintain detailed and transparent documentation of the research process, including decisions made during data collection, coding, and analysis. To assure accuracy, the researcher should also engage in member checking, where participants are given the chance to evaluate and validate the results.

Transferability measures how broadly the results can be used or relevant in different contexts or situations outside the study population (Nowell, Norris , White, & Moules , 2017). To enable readers to evaluate the application of the findings to their circumstances, the researcher will provide a full overview of the research context, participants, and data collection techniques. The use of purposive sampling to select participants who represent diverse perspectives and experiences enables the identification of commonalities and variations of data.

Dependability is the term used to describe the reliability and predictability of the research procedure and its results over time and among different researchers (Nowell, Norris , White, & Moules , 2017). The researcher maintains an audit trail documenting the research process, including decisions, revisions, and changes made during data collection, coding and analysis. The researcher will engage in reflexivity by critically examining and acknowledging the potential biases and preconceptions that may influence the interpretation of the data. The researcher will seek feedback from peers or experts in the field to validate the findings and ensure that personal biases do not unduly influence interpretations.

Confirmability is the term for the objectivity and neutrality of the research conclusions, which guarantees that they are based on the data rather than the researcher's prejudices or preferences (Nowell, Norris , White, & Moules , 2017). The researcher will use an explicit and systematic approach to coding and analysis, clearly documenting the decision-making process and rationale behind the identified themes and interpretations.

3.12 Ethical considerations

The term "ethical considerations" describes how moral principles and ideals are included in the research process. Participants' perceptions of ethical behaviour play a crucial role in determining whether a connection will result in high-quality data. Care must be taken at every level of the research process to protect participants' privacy and keep them safe from harm relative to matters of respect and dignity. The contributions and quotes of participants must be respected, and outcomes must be accurately and honestly presented (Johnson, Adkins, & Chauvin, 2020).

Informed consent: the researcher should obtain informed consent from all participants, ensuring that they are fully aware of the purpose, procedures, potential risks, and benefits of the study. The researcher should clearly explain how their participation will be voluntary and that they have the right to withdraw at any time without penalty (Wexler & Largent, 2023).

Privacy and confidentiality: the researcher should respect participants' privacy and ensure the confidentiality of their personal information and data. Store and handle all data securely, using encryption and password protection where necessary. Anonymize data during analysis and reporting to prevent the identification of individual participants. The researcher should seek permission from participants if audio or video recording is involved and clearly explain how the tapes will be used and stored (Wexler & Largent, 2023).

Anonymity: the researcher should protect the confidentiality and anonymity of participants by using pseudonyms or removing identifying information when reporting findings

Observations: When a researcher gathers data in a public setting, such as an online community, they must take public behaviour into consideration. Even though the data is available online, those who engage in the forum will demand anonymity if it addresses delicate problems like mental health, substance misuse, and so forth. If a participant is uncomfortable with participating in a forum like a chat room or Facebook

page, they should be able to communicate that to the researcher (Cilliers & Viljoen, 2021).

Data protection and security: the researcher should comply with relevant data protection laws and regulations, both nationally and internationally. We need to obtain the necessary permissions and approvals, including ethics clearance, if required by the research institution or relevant authorities. Safeguard sensitive data, particularly when dealing with financial or propriety information, to prevent unauthorised access or misuse (Lobe, Morgan, & Hoffman, 2020).

4. FINDINGS OF THE STUDY

4.1 Introduction

In this chapter, the findings of the study on the Gaps and Challenges in Supply Chain Management in South African Government Departments, with a focus on implementing an Integrated Financial Management System. To give context to the findings, the chapter starts with an overview of the participants' demographics. Subsequently, delve into the interpretation of the research findings, examining key themes and patterns that emerged from the data analysis. The findings are organised according to the research objectives.

4.2 Background information on the participants

Eleven interviews were conducted as part of the study, comprising a diverse group of participants representing various National Government Departments. The participants included five females and six males, ensuring a balanced representation of gender perspectives in the study. The selection of participants was guided by the aim of capturing various experiences and perspectives related to supply chain management within government departments. A purposive sampling approach was employed, targeting individuals with significant experience and expertise in SCM. Participants were selected based on their diverse backgrounds, as well as participants who had worked in more than

two government departments, as their varied experiences provided valuable insights into the nuances of SCM practices.

Snowballing sampling techniques were also utilised, where initial participants were asked to refer other individuals who they believed would provide valuable insights into the research topic. This approach helped that identify additional participants with relevant expertise and captured a broad range of perspectives.

The participants included Supply Chain Practitioners, Assistant Directors, Deputy Directors and Directors.

Participants	Gender	Department	Occupation	Years in government
Participant 1	Male	Procurement	Tender Specialist	11
Participant 2	Male	Procurement	Director	43
Participant 3	Female	Logistics	Assistant Director	10
Participant 4	Female	Logistics	Deputy Director	15
Participant 5	Male	Procurement	Deputy Director	10
Participant 6	Male	Procurement	Assistant Director	10
Participant 7	Female	Procurement	Supply Chain Officer	8
Participant 8	Male	Logistics	Assistant Director	12
Participant 9	Male	Logistics	Senior Supply Chain Officer	15
Participant 10	Female	Procurement	Deputy Director	5

Participant 11	Female	Finance	Deputy Director	13

Table1: Participants profiles

4.3 Procedure

An email was sent to the participants requesting their participation in the study; once they responded with a date and time, a Microsoft participation in the study; once they responded with a date and time, a Microsoft Teams invite was sent to the participants with the questionnaire.

Research questions with their linked themes and code groups are presented in Table

Research Objectives	Themes	Code Groups
RO1: To identify and analyse the challenges and risks in supply chain management within government departments	Theme 1: risks and challenges identified	Corruption
		Lack of supplier knowledge
		Lack of knowledge of internal users
		Manual administration
		Poor demand planning
		Non-compliance with regulations
		Old and outdated systems
RO2: To examine the potential mediating role of implementing an Integrated Financial Management system (IFMS) in addressing identified gaps and challenges	Theme 2: Implementing an IFMS to address challenges in Government Supply Chain Management	Automation and Efficiency
		Transparency and accountability
		Real-time tracking and monitoring
		Budget control and analysis
		Reporting analytics
RO3: To investigate available integrated Financial Management Systems in the market.	Theme 3: familiarity with IFMS	Market awareness
		List of known systems
	Theme 4: Key IFMS solutions	Consideration criteria
		Suitability assessment

	Theme 5: Factors considered when evaluating IFMS	Departmental needs
RO4: To assess the readiness of the technological infrastructure	Theme 6: technological infrastructure and upgrades	Equipment availability
		Data management
		Hardware upgrades
		Software enhancements

Table 2: Research objectives and questions with linked themes and code groups

4.4 Research questions

4.4.1 What are the major challenges you face in managing the supply chain within your government department.

This research objective and questions aim to comprehensively identify and analyse the challenges and risks associated with supply chain management within government departments to facilitate informed decisions making decision-making and develop effective strategies for enhancing efficiency, transparency and resilience in procurement processes.

4.4.1.1 Theme 1: risks and challenges identified

Several participants highlighted corruption as a significant challenge in managing the supply chain within the government department. They expressed concerns about unethical practices such as bribery and kickbacks, which undermine transparency and fairness in procurement processes. Corruption also leads to inflated costs and erodes trust in the department's operations.

> **Participant 10** mentioned that "*tender processes are politically influence, especially when the budget is high".*

Additionally, participants identified a lack of knowledge on suppliers as a critical issue. They noted that the department often relies on a limited pool of suppliers without

adequately exploring alternative options. This lack of supplier diversity hampers competitiveness and may result in suboptimal value for money.

> **Participant** 5 noted that "*even though millions of suppliers registered on the Central Supplier Database (CSD), most suppliers don't have a clue of the bidding and tendering processes, meaning only a handful of suppliers win tenders and get purchase orders".*
>
> **Participant 3** alluded that "*suppliers tend to underquote when they send their quotations and therefore, making it impossible for them to deliver or render services, that leads to delays in service delivery".*

Furthermore, participants described the supply chain management (SCM) process as very manual-based and administrative. They pointed out that outdated systems and reliance on paper-based documentation contribute to inefficiencies and procurement and inventory management errors.

> **Participant 1** mentioned that, "in our department, we don't have an intranet, no telephone lines, we only use cellphones, no system, and *we are still using the handwritten orders. We capture orders on Excel spreadsheets, which leads to human errors and duplication of orders and payments.*
>
> **Participant 7** said, "*in our department, only one person is doing three people's job. The person is sourcing quotations, assesses and awards the bid, creates orders and sends them to the suppliers. The same person is also responsible for receiving the invoices".*

Instances were cited where supply chain management issues directly affected the timely delivery of goods or services. For example, participants recounted procurement delays due to SCM quotation processes not being followed. This resulted in setbacks in project timelines and dissatisfaction among stakeholders.

> **Participant 9** mentioned "in our department, turnaround *time is a challenge. The person approving their purchases sits in another office, and their systems are not integrated. Each office has their own office even though they use one budget".*

Participant 4 alluded that; "*internal users/stakeholders are not aware of the SCM processes, they don't give clear specifications when requesting quotations, suppliers end up delivering incorrect items, thus leading to irregular and fruitless expenditure*".

Moreover, poor demand planning was identified as a recurring issue leading to stockouts or inventory overstocking. Participants cited specific cases where inaccurate demand forecasts resulted in excess inventory tying up capital or shortages impacting service delivery.

Participants expressed concerns about the key risks associated with the department's supply chain management practices. They highlighted the vulnerability of outdated systems to manipulation and fraudulent activities. These systems lack adequate controls, making them susceptible to breaches and data tampering.

Participant 11 emphasised that "using two financial management systems, BAS and Logis, *that are not fully integrated / interfacing can create significant inefficiencies and complications in managing the supply chain. Data discrepancies, duplication of efforts, and difficulty in reconciling financial records may arise when information does not seamlessly flow between these systems".*

Participant 8 mentioned*, "It is easy to manipulate the system as it is only, and the officials who are working with the systems* are aware of its shortcomings".

Additionally, participants pointed out loopholes in policies and procedures that expose the department to compliance risks. They cited examples where insufficient oversight and enforcement of regulations allowed for non-compliance with procurement guidelines, leading to legal and reputational risks. The challenges and risks outlined by participants were perceived to have a significant impact on the overall efficiency and effectiveness of the department. Service disruptions due to procurement delays and inventory shortages were cited as examples of how supply chain management issues directly affect the department's ability to fulfil its mandate.

Financial implications were also highlighted, such as increased costs from expedited orders and revenue losses due to service interruptions. Participants emphasised the need for better resource allocation and investment in modernising SCM systems to mitigate these impacts. Furthermore, compliance and reputation risks were underscored as potential consequences of the department's shortcomings in supply chain management. Participants stressed the importance of implementing robust controls and fostering a culture of transparency and accountability to address these risks and enhance the department's credibility.

4.4.2 In your opinion, how can implementing an IFMS address challenges and gaps in SCM within Government departments? What specific features or functionalities of an IFMS do you think can have a positive impact on supply chain management practices?

The research objective and question aim to investigate and analyse the extent to which implementation of an Integrated Financial Management System serves as a mediating factor in effectively addressing and mitigating the identified gaps and challenges within the existing financial management framework.

4.4.2.1 Theme 2: implementing an IFMS to address challenges in SCM

The theme was developed to explore the potential benefits and implications of leveraging IFMS solutions in the context of supply chain operations within government entities. This theme emerged from the recognition of the critical role that efficient and effective supply chain management plays in governmental operations, particularly in ensuring timely procurement, inventory management and distribution of goods and services. It seeks to address the unique challenges and complexities inherent in government supply chain management.

Several participants highlighted various features and functionalities of a potential IFMS that could significantly enhance supply chain management practices. One commonly mentioned aspect is real-time visibility and tracking capabilities. It reduces the lag time in data entry and processing. With an IFMS, real-time visibility helps identify and rectify errors promptly, preventing the propagation of inaccuracies throughout the system. Another notable feature is the integration of financial and operational data. By having

financial and supply chain data in one system, users can gain deeper insights into cost drivers, identify areas for cost optimisation and streamline financial processes related to procurement, inventory management and distribution.

> **Participant 6** went on to say, "one of the functionalities of *the IFMS, the system must have a revenue module to receive and record income, it must have an expenditure module, payment and account payables module, budget reporting and also budget allocations; it needs to have an asset management module".*
>
> **Participant 1** elaborated that; "*a functionality that is mostly needed is the Electronic Procurement Solution (EPS), remember SCM deals with a lot of non-financial activities before you go to the system and transact, there's a lot of non-financial activities, like your policies, you legislation requirements, your supplier database. The initial stages of procurement, and later, you still need to deal with the contract management, that is non-financial activities".*
>
> **Participant 10** said that "one crucial aspect to consider *the is the integration with external databases such as Central Supplier Database (CSD) and Companies and Intellectual Property Commission (CIPC). A system that seamlessly links with the CSD and CIPC can streamline procurement processes, enhance vendor management, and ensure compliance with government regulations. This integration improves data accuracy and facilitates easier access to supplier information, ultimately contributing to more efficient supply chain management practices".*

Furthermore, participants also emphasised the importance of automation and workflow optimisation within an IFMS. Automated processes for order processing, invoicing and payment can reduce manual errors, accelerate transactional cycles and improve overall efficiency in supply chain operations. Additionally, workflow optimisation features such as automated alerts and notifications can help streamline communication and collaboration between different stakeholders in the supply chain. Overall, participants agreed that an IFMS with robust features such as real-time visibility, integration of financial and operational data, automation, workflow optimisation, and integration with

external databases can greatly enhance supply chain management practices, leading to improved efficiency and cost savings.

Participants from various departments responded positively to the benefits of integration. They noted that consolidated reports offer a comprehensive financial and supply chain performance overview, providing insights into expenditure patterns, procurement efficiency, inventory levels, and supplier performance. This allows for better trend analysis, identification of improvement areas, and informed decision-making regarding resource allocation and operational processes.

Integrating financial management functions with supply chain management processes through a unified system enhances coordination and resource management within government departments. It ensures proper accounting for department funds, facilitates efficient asset allocation. The integrated approach ultimately leads to more transparent, accountable, and effective management of resources throughout the supply chain. Furthermore, the ability to access real-time expenditures, commitments, and procurement data empowers decision-makers to make timely adjustments and strategic plans. The inclusion of purchase orders, invoices, and inventory levels in consolidated reports facilitates a holistic understanding of the financial impact of supply chain decisions, enabling cost-saving opportunities and optimal resource utilization. Overall, the collaborative approach fostered by integrated financial and supply chain management functions contributes to better coordination, efficiency and accountability within government departments.

4.4.3 Are you familiar with any existing Integrated Financial Management Systems in the market? What are the key IFMS solutions you have come across or considered for implementation in your department?

This research objective and question aims to conduct a thorough investigation into the diverse range of Integrated Financial Management Systems available in the market, aim to comprehensively understand their functionalities, features and suitability for addressing specific organisational financial needs and challenges.

4.4.3.1 Theme 3: familiarity with IFMS

The theme was developed to gauge participant's knowledge and awareness of existing financial management solutions in the market. Understanding the extent of their familiarity with IFMS allows for a better assessment of their readiness to engage in discussions related to financial technology adoption and implementation.

Most participants are familiar with several IFMS currently available in the market.

> **Participant 1** emphasised, "Being *deeply involved in the financial domain, staying abreast of advancements in financial technologies and systems is considered important".*
>
> **Participant 2** further elaborated, "*my awareness extends beyond just the names of these systems; I am cognizant of their respective features, functionalities, implementation requirements and a few success stories from other organisations".*

Several participants mentioned the following IFMS that they are aware of:

- SAP
- Oracle
- Microsoft Dynamics 365 Finance
- E-Asset
- SAGE cloud-based computing system
- ISS System
- Iqual
- E-tool system
- Barn Owl

4.4.3.2 Theme 4: key IFMS Solutions

The theme was developed to comprehensively understand the solutions considered for implementation within the departments. Understanding the key solutions allows insights into the features, functionalities, and capabilities deemed necessary by departments for effective financial management. Additionally, this then sheds light on the department's awareness of available IFMS options in the market and their alignment with organisational goals, operational requirements and budgetary constraints.

Contrary perspectives were noted among the participants regarding their exploration of potential IFMS solutions for implementation within their departments, and the majority of participants encountered several key options that garnered significant consideration. They have diligently evaluated these solutions against a rigorous set of criteria to ensure that they align with the department's objectives and requirements. Key factors under consideration include cost-effectiveness, scalability, integration capabilities with existing systems, user-friendliness, and the availability of robust support services. Participants prioritise solutions that offer a balance between advanced features and ease of implementation, recognising the importance of minimising disruption to ongoing operations while maximising the benefits of adopting an IFMS.

Additionally, compliance with regulatory standards and data security protocols is deemed paramount in their evaluation process, ensuring that the selected IFMS solution meets the stringent requirements of their government departments.

> **Participant 7** highlighted that "*one of the critical functionalities of an IFMS is its ability to detect and prevent duplicate payment. The system should have mechanisms to flag duplicate invoices or payments before processing, reducing the risk of financial losses and irregular and fruitless expenditure".*
>
> **Participant 8** emphasised that "*the IFMS should provide comprehensive and customisable reporting capabilities, including detailed monthly reporting on payments, commitments, and assets. These reports should offer insights into*

financial transactions, budget utilisation, and procurement activities, enabling effecting monitoring and decision-making by departmental stakeholders".

Participant 9 suggests that "*opting for an IFMS with cloud storage capabilities offers several advantages. Cloud-based solutions eliminate the need for on-premises infrastructure, reducing upfront costs and simplifying maintenance".*

4.4.3.3 Theme 5: Factors Considered When Evaluating IFMS

The theme was developed to delve into the decision-making process surrounding the adoption of IFMS solutions within government departments. This theme seeks to uncover the multitude of considerations that influence the selection of an IFMS.

The consensus was observed regarding the evaluation of an IFMS solution for suitability within government departments; the majority of participants considered several key factors that include technical capability, costs, compliance, scalability, customization, integration and user-friendliness. They prioritise conducting a thorough suitability assessment to ensure alignment with specific needs and objectives of their department.

This involves analysing the technical capabilities of the system to handle governmental financial management processes effectively, alongside assessing cost implications to ensure financial viability within budgetary constraints. The suitability assessment strongly emphasises compliance with regulatory standards and data security protocols due to the sensitivity of governmental financial data. Additionally, scalability is deemed crucial to adapt to evolving departmental requirements over time, while customisation capabilities are essential to tailor the IFMS to unique workflows and requirements.

Participant 6 suggests that "*an IFMS should be user-friendly and have an intuitive interface to ensure that employees can navigate the system effectively. Training requirements should be minimal, and users should easily adopt the system according to different departments".*

Several participants emphasised that integration with existing systems, aligned with each department's needs, such as financial reporting, budgeting, procurement, compliance, inventory management, and human resources integration, is another vital factor in ensuring seamless interoperability and user adoption.

By considering these factors comprehensibly, participants aim to select an IFMS solution that not only meets immediate needs but also offers flexibility and robust functionality to support long-term departmental objectives, thereby enhancing financial management processes, decision-making capabilities, overall efficiency and transparency within their government departments.

In conclusion, the familiarity of most participants with existing IFMS solutions in the market reflects a robust level of market awareness. This heightened awareness equips them effectively to contribute to discussions and decisions regarding adopting an IFMS solution that aligns best with the needs and objectives of their government departments. Their thorough understanding of the available IFMS options positions them strategically to navigate the complexities of selecting a solution that meets immediate requirements and supports long-term goals. Additionally, the exploration of key IFMS solutions for implementation within their department is characterised by a meticulous assessment process. Participants prioritise evaluating the alignment of potential solutions within their department's objectives, ensuring that selected IFMS options can effectively meet operational requirements.

The participants' approach to exploring and evaluating key IFMS solutions underscores their commitment to informed decision-making and strategic planning. Their methodical assessment, driven by a comprehensive understanding of market dynamics and departmental needs, positions them to identify a solution that not only addresses immediate challenges but also lays the groundwork for future success. Through their collective efforts, they seek to leverage technology effectively to drive positive outcomes and advance the mission of their government department.

4.4.4 How well equipped is your department's technological infrastructure? Have there been any upgrades or improvements made to the technological infrastructure to ensure compatibility and efficiency with the IFMS / ERP?

This research objective aims to evaluate the current state and capacity of the technological infrastructure to support organisational needs, identifying strengths, weaknesses, and areas for improvement, thereby facilitating informed decision-making and strategic planning for future technology investments.

4.4.4.1 Theme 6: technological infrastructure and upgrades

Equipment availability and data management

Several participants emphasised that they have a department that boasts a well-equipped technological infrastructure, positioning them favourably for the implementation of an IFMS. Currently, they utilise two financial systems (Logis and BAS) that demonstrate effectiveness in supporting their financial management needs. These systems are operating smoothly, indicating the capability of their technical infrastructure to handle complex financial processes and data management.

Moreover, their network connection is dependable, ensuring smooth communication and data transfer among different systems and departments. This reliability proves crucial for successful implementation and operation of an IFMS, guaranteeing uninterrupted access to essential financial information and processes. Furthermore, most participants indicated that their departments provided all employees with computers, furnishing them with the necessary tools to access and interact with the current financial management systems. Additionally, these computers are linked to various printers, simplifying the generation of hard copies of documents or reports as required.

A few participants mentioned that in anticipation of implementing an IFMS, their department has embarked on several upgrades and improvements to enhance the compatibility and efficiency of their technological infrastructure. These efforts encompass investing in upgraded hardware and software systems, implanting robust data

management protocols, bolstering cybersecurity measures, and providing staff training on utilising new technologies and IFMS functionalities.

Participant 11 explained the challenges they faced before software enhancements:

> *"We used to have connectivity problems in the department; you know there are times when if you are in a Teams meeting, you must take your laptop and walk around your office and even go to the passage because you will be chasing network. I'm noticing that it's been a while since one has experienced such issues".*

> **Participant 5** mentioned that: *"the current systems we are using sometimes operate very well and can carry the workload even though we had challenges at some stage in terms of infrastructure where the network was very poor in such a way that when we work on the system, you find that you take time to do just one transaction".*

Furthermore, they highlighted their collaboration with external vendors and consultants to evaluate their existing infrastructure and pinpoint areas for enhancement to align with IFMS requirements.

Most department's technological infrastructure is well-prepared to support the implementation of an IFMS. With existing financial systems in place, reliable network connectivity, and computer access for all employees, they have a solid foundation to seamlessly integrate IFMS into their operations and further enhance their financial management capabilities.

Upgrades and improvements to the technological infrastructure, including network connectivity, employee computer systems, and software compatibility, have been implemented to enhance efficiency with the IFMS solution. These measures ensure that the department can fully leverage the capabilities of the system to optimize financial management processes and drive organisational success.

5.DISCUSSION, CONCLUSION, RECOMMENDATIONS

5.1 Introduction

This chapter presents implications of the findings in a basis of the main and specific objectives of the study. The chapter concludes the research by providing the summary of the findings, discussion of findings, and limitations,

The findings and themes presented in Chapter 4 will be discussed in depth. The significance of the research in the context of risks and challenges identified, implementing IFMS to address challenges in Government supply chain management, familiarity with available systems in the market, factors that should be considered when evaluating IFMS, technological infrastructure and upgrades are examined. The recommendations for further research study will close the chapter.

5.2 Summary of the Findings

The findings of this research shed light on various critical insights pertaining to the identification and analysis of challenges and risks within supply chain management in government departments. Primarily, the study uncovered a series of risks and challenges that resonate with previous research in the field, thereby highlighting the robustness and significance of these observed phenomena. Drawing upon relevant literature, the consistency observed in the identification of risks such as corruption, lack of supplier knowledge, inadequate understanding of internal users, manual administration processes, poor demand planning, non-compliance with regulations, and reliance on outdated systems underscores the enduring nature of these challenges within governmental supply chains.

Corruption emerges as a pervasive risk, echoing the findings of prior studies that have highlighted its detrimental impact on supply chain integrity and efficiency. South Africa's corruption SCM and procurement have taken place at all governmental levels and across the public domain. The lack of accountability, openness, and reasonable procedures in public procurement systems causes financial mismanagement and corruption, which has cost the nation's residents billions of rands (Mantzaris, 2017). The prevalence of

corruption underscores the urgent need for stringent anti-corruption measures and increased transparency in procurement processes within government departments.

Additionally, the study reveals a concerning lack of supplier knowledge and internal user understanding, pointing to potential gaps in communication and collaboration between government agencies and external suppliers, as well as internal stakeholders. This underscores the importance of fostering stronger relationships with suppliers and enhancing internal communication channels to mitigate risks associated with insufficient knowledge and understanding.

Furthermore, the reliance on manual administration processes and outdated systems within government supply chains poses significant operational challenges, including inefficiencies and increased susceptibility to errors. Modernizing administrative processes and investing in technology upgrades are crucial steps toward enhancing the agility and effectiveness of supply chain operations within government departments.

Poor demand planning emerges as another notable challenge, with implications for inventory management and resource allocation. Improving forecasting techniques and leveraging data analytics can aid in optimizing demand planning processes and minimizing the risks associated with inaccurate demand projections.

It was observed that non-compliance with regulations presents a regulatory risk that can lead to legal ramifications and reputational damage for government agencies. According to Mantzaris (2017) selection procedures have shown that non-compliance with laws, rules and regulations – whether on intent or out of ignorance - is inimical to competitive processes. Strengthening compliance mechanisms and implementing robust monitoring and enforcement protocols are essential for ensuring adherence to regulatory requirements and safeguarding the integrity of government supply chains.

5.3 Limitations

A primary limitation of the study was the inability to fully assess the readiness of staff and the impact of IFMS implementation on various aspects such as transparency, coordination, resource management, and supply chain performance within government

departments. This limitation stemmed from the absence of IFMS in government departments, which hindered the ability to collect empirical data for analysis.

The absence of IFMS implementation limited the scope of the study, preventing the exploration of its direct effects on organizational dynamics and performance metrics. This restricted the depth of understanding regarding the potential benefits or challenges associated with IFMS adoption in governmental settings.

Another constraint was the lack of available policies surrounding IFMS and ERPs within the context of government departments. This limited the examination of policy frameworks and regulatory guidelines that could influence the successful implementation and operation of IFMS.

5.4 Recommendation for future studies

Pre- and Post-Implementation Assessment: Given the imminent implementation of IFMS by the National Treasury, future research should focus on conducting comprehensive pre- and post-implementation assessments. This longitudinal study would enable researchers to capture the changes in organizational readiness, operational efficiency, and performance outcomes resulting from IFMS adoption.

Impact Evaluation: A thorough evaluation of the impact of IFMS implementation on transparency, coordination, resource management, and supply chain performance should be conducted post-implementation. This research could involve qualitative and quantitative analyses to assess the tangible benefits and challenges associated with IFMS integration within government departments.

Comparative Studies: Comparative studies between government departments that have implemented IFMS and those that have not could provide valuable insights into the differential effects of IFMS adoption. By comparing organizational outcomes, such as efficiency, cost-effectiveness, and service delivery, researchers can identify best practices and areas for improvement in IFMS implementation strategies.

5.5 Conclusion

In conclusion, this research study sheds light on the prevalent gaps and challenges within the supply chain management processes of South African Government Departments, with a specific focus on the role of implementing Integrated Financial Management Systems (IFMS). Through the utilisation of qualitative research methodology, specifically semi-structured interviews involving 11 participants from various government departments, significant insights were gleaned.

The findings underscored several critical challenges impeding effective supply chain management within these departments, including fragmented systems, lack of transparency, inefficient processes, and inadequate integration of financial management systems. Moreover, the research highlighted the pivotal role that IFMS can play in addressing these challenges by streamlining processes, enhancing transparency, and facilitating better decision-making.

Through in-depth interviews, participants provided rich and nuanced perspectives on the current state of supply chain management and the potential impact of IFMS implementation. Their insights not only confirmed existing literature but also provided context-specific nuances and practical recommendations for improvement.

Overall, this study achieved a comprehensive understanding of the gaps and challenges in supply chain management within South African Government Departments and emphasised the critical role of IFMS in addressing these issues. The findings contribute to the existing body of knowledge in both supply chain management and public administration, providing valuable insights for policymakers, practitioners, and researchers alike. Furthermore, the study sets a foundation for future research and initiatives aimed at enhancing the efficiency, transparency, and effectiveness of supply chain management in the public sector.

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Appendix A: Research instrument

Section A: Demographics

Gender

Male	Female
☐	☐

What is your current position in the organisation? _____

How long have you been in this position?

Less than 1 year	2 - 3 Years:	4 – 5 years:	6 – 10 years	Above 10 years
☐	☐	☐	☐	☐

What is the highest level of education you have attained?

Diploma	Degree	Postgraduate	Masters	Other
☐	☐	☐	☐	☐

Specify other: _____

What is your level of management?

Top	Middle	Supervisor	Other
☐	☐	☐	☐

Specify other: _____

Which department do you work in?

Procurement	Logistics	Finance	ICT Office	Other
☐	☐	☐	☐	☐

Specify other: _____

Has your organisation implemented an IFMS?

Yes	No
☐	☐

Section B; Detailed interview

1. ***Objective: To identify and analyze the challenges and risks in supply chain management within government departments.***
   - 1.1 What are the major challenges you face in managing the supply chain within your government department?
   - 1.2 Can you provide specific examples of instances where supply chain management issues have affected the timely delivery of goods or services?
   - 1.3 What are the key risks associated with the current supply chain management practices in your department?
   - 1.4 How do you perceive the impact of these challenges and risks on the overall efficiency and effectiveness of your department?

2. ***Objective: To examine the potential mediating role of implementing an Integrated Financial Management System (IFMS) in addressing the identified gaps and challenges.***
   - 2.1 In your opinion, how can implementing an IFMS address the challenges and gaps in supply chain management within government departments?

2.2 What specific features or functionalities of an IFMS do you think can have a positive impact on supply chain management practices?

2.3 How do you foresee the integration of financial management functions with supply chain management processes contributing to better coordination and resource management?

3. Objective: To investigate available Integrated Financial Management Systems in the market.

3.1 Are you familiar with any existing Integrated Financial Management Systems (IFMS) in the market?

3.2 What are the key IFMS solutions you have come across or considered for implementation in your department?

3.3 What factors do you consider when evaluating an IFMS solution for suitability within your government department?

4. Objective: To assess the readiness of the technological infrastructure.

4.1 How well-equipped is your department's technological infrastructure to support the implementation of an IFMS/ERP?

4.2 Have there been any upgrades or improvements made to the technological infrastructure to ensure compatibility and efficiency with the IFMS/ERP?

4.3 What challenges, if any, have you encountered in integrating the IFMS/ERP with the existing technological infrastructure?

Annexure B: Participant Information Sheet

Participant Information Sheet (PIS)

Good day

My name is Lerato Tshabalala. I am a Masters student in Master of Business Administration at the University of the Witwatersrand, Johannesburg. My supervisor is Ms Ayanda Magida. I am conducting a research study about the role of implementing Integrated Financial Management Systems. The study title is Gaps and Challenges in Supply Chain Management in South African Government Departments: the role implementing an Integrated Financial Management Systems.

I am inviting you to take part in a semi-structured interview. If you decide to take part, your participation in this research study will last about 20 to 30 minutes to complete. The interview will take place at a location and time convenient for you (place and time will be confirmed closer to the interview).

With your permission, I would like to audio record the interview. This data will be stored in password protected file for five years and will be deleted after 5 years. Only the researcher will have access to the data.

During the research activity, I will need to ask for some personal information about you, including the number of years in the position, highest qualification, years of experience in Supply Chain Management.

The interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part in the research study, it should be because you want to volunteer. You do not have to take part. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more than what happens in everyday life / some of the questions asked may make you feel sad or upset. If this happens, I will stop the interview and continue another time.

This research study will be written up as a research report. The report will be available on the university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or my supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email hrecnon-medical@wits.ac.za.

Yours sincerely,
Lerato Tshabalala

Researcher:
Lerato Tshabalala, 2398468@students.wits.ac.za, 078 973 6650

Supervisor:
Ms Ayanda Magida, Ayanda.magida@wits.ac.za

Annexure C: ethics approval

Graduate School of Business Administration
University of the Witwatersrand, Johannesburg

Wits Business School Ethics Committee
Constituted under the University Human Research Ethics Committee (Non-Medical)

Ethics Clearance Certificate

Ethics protocol number: WBS/BA2398468/327
This certificate is only valid with a legitimate ethics protocol number and signed by the Researcher (below)

Project title	Gaps and challenges in supply chain management in South African government departments
Investigator / Researcher	Ms Lerato Tshabalala
Nature of Project	MBA (Research Article)
Decision of the Committee	Approved, provided stakeholders and participants are guaranteed anonymity and confidentiality.
Issue Date of Certificate	2023/10/13
Expiry date	Date of submission of the project / research report
Chairperson	Dr Pius Oba ☎ +27 11 717 3976 +27 82 733 6587 ✉ pius.oba@wits.ac.za

Declaration by Researcher

One copy must be signed by the Researcher and returned to the Chairperson of the Wits Business School Ethics Committee.

I fully understand the conditions under which I am authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I undertake to resubmit the protocol to the Committee.

Tshabalala — Signature

18 October 2023 — Date:

Appendix D: organisation approval letter

human settlements

Department:
Human Settlements
REPUBLIC OF SOUTH AFRICA

[illegible]

REFERENCE: 20/2/3/1
ENQUIRIES: F Jama
EXTENSION: (012) 444-9075

Ms Lerato Tshabalala
203 Christiaan Flat , 130 Troye Street
Sunnyside
0132

Dear Ms Tshabalala

APPROVAL TO CONDUCT RESEARCH IN THE NATIONAL DEPARTMENT OF HUMAN SETTLEMENTS

Your request to conduct research in the Department on the topic: *"Gaps and challenge in supply chain management in South African government departments"* has reference.

This letter serves to inform you that permission has been granted for you to conduct your academic research at the National Department of Human Settlements.

It is a pleasure to inform you that you will conduct your study in collaboration with the Branch: Corporate Services. The Chief Directorate: Human Resource Management will identify relevant contact persons in the relevant Chief Directorate to assist you towards your research. The Departmental chief facilitator is Mr P Peter, contactable at (012) 444 9072 / Pumlani.Peter@dhs.gov.za.

Please be informed that, upon completion of your study you will be required to furnish the Department with feedback of your findings in a form of a seminar or presentation, and a copy of your dissertation/thesis to the specified person for archiving purposes.

As part of the approval process, you are requested to sign the Confidentiality Agreement attached hereto and send it back to the Departmental chief facilitator Mr P Peter.

Kind Regards

[illegible]

MR SC ZAMA
ACTING DIRECTOR-GENERAL: HUMAN SETTLEMENTS
DATE: 28 SEPTEMBER 2023