

**School of Public Management and Administration**  
**PROVINCIAL INFRASTRUCTURE SUPPLY CHAIN MANAGEMENT AT THE**  
**CHARLOTTE**

**MAXEKE JOHANNESBURG ACADEMIC HOSPITAL**

**By**

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## **DEDICATION**

I dedicate this dissertation to my mother, Joyce Nomandla Mhlongo- without your love and continuous support, this academic accomplishment would not be possible. Thank you for being my biggest cheerleader. I promise to make you proud now and forever. I further dedicate this to my baby, Mmusi Oreabetse, I hope this motivates you to always follow your heart and be a go getter.

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## ABSTRACT

This study delved into the challenges faced by the health infrastructure Supply Chain Management (SCM) within the Gauteng Department of Infrastructure Development (GDID), with a specific focus on the Charlotte Maxeke Johannesburg Academic Hospital (CMJAH). SCM has attracted the interest of numerous academics in recent years and has played a key role in business efficiency. However, limited studies have focussed on public health infrastructure SCM. In this regard, this study investigated the health infrastructure SCM experiences within the GDID to determine its efficiency and effectiveness. The findings of this study are based on information gathered through qualitative research with a case study design. The purposive sample used in the study, includes 5 public officials from GDID. This target population was better positioned to provide their perspectives on SCM processes. Data was collected using both primary (Semi-structured interviews) and secondary sources, and the study employed thematic data analysis for analysing the data. The study revealed that even with the push to equip professionals with vital skills and knowledge, implementing SCM continues to pose a significant challenge, and the level of satisfaction with SCM implementation in many government organisations are below expectations. The study also uncovered that hospital infrastructure in South Africa has a shorter design lifespan compared to new constructions, and maintenance practices exhibit higher emissions values than new constructions. The study recommends that fundamental institutional reforms will need to be put in place in order to overcome health infrastructure supply chain management shortcomings and realise the goals of efficient healthcare delivery. In order for the government to provide the community with the necessary level and quantity of services, these changes must support effective and efficient systems and procedures for provisioning and procurement. Furthermore, qualified SCM practitioners should be employed, this will ensure that the right personnel are in the right place at the right time.

**Keywords:** Supply Chain Management, health infrastructure, Gauteng Department of Infrastructure Development, implementation.

## List of Abbreviations and acronyms used in this study

|              |  |
|--------------|--|
| <b>BBBEE</b> | Broad Based Black Economic Empowerment           |
| <b>CEO</b>   | Chief Executive Officer                          |
| <b>CMJAH</b> | Charlotte Maxeke Johannesburg academic Hospital  |
| <b>DHMIS</b> | District Health Management Information System    |
| <b>DID</b>   | Department of Infrastructure Development         |
| <b>DoH</b>   | Department of Health                             |
| <b>GCR</b>   | Gauteng City Region                              |
| <b>GDID</b>  | Gauteng Department of Infrastructure Development |
| <b>GIFA</b>  | Gauteng Infrastructure Financing Agency          |
| <b>HOD</b>   | Head of Department                               |
| <b>ICRM</b>  | Ideal Clinic Realisation and Maintenance         |
| <b>IFMS</b>  | Integrated Financial Management System           |
| <b>SCM</b>   | Supply Chain Management                          |
| <b>MTEF</b>  | Medium Term Expenditure Framework                |
| <b>MFMA</b>  | Municipal Finance Management Act                 |
| <b>NDoH</b>  | National Department of Health                    |
| <b>NDP</b>   | National Development Plan                        |
| <b>NHI</b>   | National Health Insurance                        |
| <b>NPM</b>   | New Public Management                            |
| <b>NPS</b>   | New Public Service                               |
| <b>NTSP</b>  | National Treasury Strategic Plan                 |
| <b>NTR</b>   | National Treasury Regulations                    |
| <b>PFMA</b>  | Public Finance Management Act                    |

**PPPFA**

Preferential Procurement Policy

Framework Act

**RSA**

Republic of South Africa

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## CHAPTER ONE

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

The supply chain continues to be a path for service delivery; therefore, adjustments made, or the introduction of new regulatory frameworks have led to consistent advancements in the field. The Gauteng Department of Infrastructure Development (GDID) has as one of its main goals "making a better life for all" by way of the provision and upkeep of infrastructure for public institutions such as public schools, public hospitals, public clinics, and frail-care facilities. Other priorities include the creation of decent work, the development of an expanding, all-inclusive economy, and the promotion of standard education and skill development (Department of Infrastructure Development 2018:12).

The GDID serves as the custodian of public property in Gauteng. It actively implements policies related to "preferential procurement and broad-based black economic empowerment (BBBEE)" in alignment with predefined objectives (Department of Infrastructure Development 2020:25). The Gauteng Provincial Government has been paying close attention to government procurement. Government departments have developed various solutions to enhance the execution of supply chain management (SCM) and advance service delivery. Despite these initiatives, the Gauteng Department of Health (GDoH) has experienced several setbacks due to poor quality healthcare services at several of its institutions. More emphasis has been placed on healthcare professional shortages and hospital neglect as sources of hiccups in providing quality healthcare services (Department of Infrastructure Development 2018:12).

The GDID's vision is to be a leading sustainable infrastructure provider and facilitator that positions Gauteng as a globally competitive city region, with inclusive economic growth and decent work for all. Its mission is to contribute towards the radical transformation, modernisation, and re-industrialisation of Gauteng by accelerating integrated service delivery, maintenance, and management of public infrastructure and deploying built environment professionals while encouraging the active participation of an empowered citizenry. The department is driven by the following values: integrity, honesty, professionalism, transparency, accountability, collective responsibility,

compassion, innovation, as well as value addition (Department of Infrastructure Development 2023:23).

On the authority of the Parliament of the Republic of South Africa (2022:04) the Charlotte Maxeke Johannesburg Academic Hospital (CMJAH) is a comprehensive secondary healthcare facility located in Parktown, Gauteng Province, South Africa. On April 16, 2021, CMJAH experienced a fire that severely damaged the third-floor parking structure and caused structural instability in several locations on the northern side of the building. The dry surgical supplies' cabinet, according to hospital officials, is where the issue started. The fire destroyed medical supplies and personnel safety equipment worth an estimated R40 million (ENCA YouTube 2022). Despite not complying with fire safety requirements, the facility had earlier in the year 2020 passed a fitness examination. Fitness examination for a facility refers to an assessment that evaluates the overall condition and readiness of the facility to operate efficiently and safely (Motara *et al.* 202:18). Investigations revealed its non-compliance with fire safety regulations. These investigations occurred from the response to media reports regarding inadequate services at health facilities in Gauteng in 2020, the Public Protector conducted site inspections at six hospitals in August 2020. This included a site inspection to CMJAH prior to its devastating fire. While the Gauteng Health Department asserted that the provincial Department of Infrastructure had conducted an inspection of the building in late 2020, Johannesburg's Emergency Management Services contradicted this claim, pointing out that the hospital's fire suppression system was deficient in water supply (Parliament of the Republic of South Africa 2022:05).

Due to the inconsistency in the narratives about the above-mentioned incident, the researcher intended to investigate the SCM processes within the GDID; therefore, this study explored the public health infrastructure Supply Chain Management (SCM) challenges encountered within GDID, with a specific focus on the Charlotte Maxeke Johannesburg Academic Hospital. The study further delves into the perceptions and experiences related to health infrastructure within the GDID.

## 1.2 Background

In 2004, as part of the strategic plan devised by the South African National Treasury, SCM seminars and coaching initiatives were introduced across diverse government sectors. These training sessions and workshops have been designed to offer directives for integrating SCM, as detailed by Ambe and Badenhorst-Weiss (2012:02). Additionally, to date, rules and bulletins are made available to tackle issues related to SCM deployment. The primary goal is to advocate for consistency in purchasing processes and enhance services for the community. Nevertheless, even with the push to equip professionals with vital skills and knowledge, implementing SCM continues to pose a significant challenge, and the level of satisfaction with SCM implementation in many government organisations remains subpar is not at all satisfactory in many government organisations (Reda *et al.* 2020:706).

The Public Service Commission's examination (2009) also revealed noteworthy issues in executing essential SCM, procurement regulations, processes, and oversight controls. The pressure on government organisations to handle SCM issues is growing (Business Day Report 2021:12).

In addition, pressure is being applied by the media, as well as service providers and members of the public at large, as noticed in the rise of interest in procurement and SCM issues. While specific departments and municipalities are demonstrating a serious commitment to addressing concerns at different levels of their processes, others are striving to make important adjustments with the aim of maintaining the integrity of their supply chain and procurement systems (Business Day Report 2021:14).

According to Miao *et al.* (2010:32) a set of practises known as SCM are intended to manage and coordinate the whole supply chain, from fresh material providers to final consumers. "SCM is the systems approach to managing the entire flow of information, materials, and services from raw material suppliers through factories and warehouses to the end customer", according to Leenders and Fearon (2004:539). SCM, according to Alotaibi *et al.* (2020:267) is "the management of upstream and downstream relationships with suppliers and customers in order to deliver superior customer value at a lower cost to the supply chain as a whole."

Ambiguity around the term as demonstrated above points to the necessity for a more in-depth analysis of SCM to provide an exact definition of the concept, delineate the components contributing to efficient SCM, and suggest how the adoption of an SCM strategy might impact business strategy and performance (Di Vaio *et al.* 2023:610).

The definition of "supply chain" appears to be more often agreed upon by authors than that of "supply chain management" (Reda *et al.* 2020:710), according to Christopher (2005:183) and Matthee (2006:12). A set of companies that transmit commodities is referred to as a supply chain. A supply chain often comprises of numerous unaffiliated companies who collaborate to create and distribute a product to the consumer. These companies encompass raw material producers, component manufacturers, product assemblers, distributors, retail merchants, and transportation firms (Mentzer *et al.* 2001:04). The coordination of companies that market goods or services is what Akinsulire *et al.* (2024:115) refers to as a supply chain. Be aware that in these cases, the supply chain includes the final consumer.

The SCM strategy may differ depending on the government, the firm, and the industry. While SCM in the education sector may prioritise the optimisation of the supply chain for delivering teaching materials to students, the healthcare sector, for example, may place greater emphasis on the coordination and efficient flow of goods and services in and out of hospitals. It is important to note that the supply chain and the SCM strategies employed can vary significantly based on several factors (Ambe & Badenhorst-Weiss 2012:08).

As per the claims of SCM policy, management teams, accounting officers, and other staff members must be aware of and comprehend the values or concepts incorporated into the legal framework that have an impact on SCM (Di Vaio *et al.* 2023:611). Every step of the process, from the demand for goods or services to their purchase, logistics process management, and disposal is where SCM looks to add value. In doing so, it handles issues with inventory and asset control, obsolescence planning, contract management, and procurement (Matthee 2006:18)

### 1.3 Problem statement

Governance can be defined as the process of identifying individuals competent to make authoritative political judgements; the government's ability to efficiently manage its resources and execute effective programs; and the regard that citizens and governments hold for the institutions regulating their interactions (Ansell & Torfing 2022:03)

The Gauteng Department of Infrastructure Development (GDID) has several key responsibilities in the province. These include the development of health infrastructure specified in the Medium-Term Expenditure Framework (MTEF), collaborating with various stakeholders to provide integrated health services, reducing the burden of illness in the province, and minimising health vulnerabilities. Additionally, GDID strives to complete infrastructure projects within 90% of the allotted time and budget, while maintaining acceptable quality standards throughout the MTEF period (Department of Infrastructure Development 2020:15). The province's population's overall health is the focus of these efforts. The Department of Infrastructure Development (2020:15) demonstrates its commitment to the systematic development and maintenance of hospitals and clinics within the Gauteng City Region (GCR) (Department of Infrastructure Development 2020:15).

GDID is obligated to see to it that the assets under its custody receive high-quality maintenance services. Additionally, one of its main duties is to make sure that all public health facilities in the GCR are kept in good condition (Department of Health 2023:30). 32 hospitals have conducted condition assessment exercises as part of their plans to assess their level of functionality.

A hospital with a low rating is considered to have significant shortcomings in delivering quality healthcare, patient safety, or service standards, which may impact the hospital's reputation and the trust of patients and healthcare professionals. To address hospitals with low ratings, as a component of the Maintenance Turn-Around Strategy, the department is actively working towards establishing a fully functional facilities-management capability. This strategic move is intended to assist the department in transitioning from a reactive approach to a proactive one in the maintenance of healthcare facilities (Department of Infrastructure Development 2020:20).

Following the incident at CMJAH, the expectation by the Department of Health was that the hospital would be closed for a short time for necessary repairs before quickly reopening. However, there had been substantial delays, mostly due to several health and safety compliance issues discovered following the incident. It was later determined that the hospital's fire safety had not been examined since 2017, which was four years before the incident (Parliament of the Republic of South Africa 2022:8).

According to Matara *et al.* (2021:139) there is a need for ongoing infrastructural repair and maintenance to ensure facilities are safe for both staff and patients at CMJAH. Many hospitals in South Africa were built more than 30 years ago, and the fire compliance regulations have changed substantially since then, raising challenges with current compliance requirements. This is exacerbated by limited maintenance, fire exits being blocked by broken equipment and furniture, and insufficient early warning systems. Therefore, it was against this background that this study was conducted to investigate the health infrastructure SCM within the GDID to understand the health infrastructure SCM processes.

#### **1.4 Research objectives**

- According to Dhir and Gupta (2021:587) the objectives serve as milestones for the ultimate goal, and they are classified as primary and secondary. Kumar (2011:397) describes research objectives as a specific statement of goals that one sets out to achieve at the end of a research journey, which also enable the researcher to have a holistic overview of the study through the consideration of the various facets of the study. This study's primary objective was to explore and understand the perceptions and experiences related to health infrastructure supply chain management within the GDID

To ensure the fulfilment of the study's primary objective, the secondary objectives listed below were formulated:

- to investigate the role of various stakeholders in the health infrastructure SCM process at GDID.
- explore the challenges faced by the health infrastructure SCM unit within the Gauteng Department of Infrastructure Development.
- to offer recommendations as to how the GDID may implement health infrastructure SCM processes to avoid and/or address challenges.

## 1.5 Research questions

According to Punch (2006:65) the significance of the research questions is to inform the reader which questions the study endeavours to respond to. Dhir and Gupta (2021:584) state that Research questions are the questions or the queries which the researcher is trying to answer by investigating. The study will answer the following primary question:

- What are the perceptions and experiences related to health infrastructure SCM within the GDID?

The study will also answer the following secondary questions:

- What are the challenges faced by the health infrastructure SCM within the GDID?
- What roles do various stakeholders play in the infrastructure SCM processes at GDID?
- What recommendations can be offered to GDID to implement SCM policies to avoid and/or address the challenges encountered?

## **1.6 Research methodology**

The study used the qualitative research approach, which provided a more comprehensive understanding of the implementation of health infrastructure SCM processes within the Gauteng Department of Infrastructure Development. Through this method, the researcher was able to understand the topic under study through the experiences of identified officials within the GDID. These officials are directly involved in the daily activities of health infrastructure SCM. The study was conducted using a case study design. A case study is a method of conducting research that involves empirically analysing a particular contemporary issue (Moser & Korstjens 2018:09). In this instance, the Gauteng Department of Infrastructure Development is the case study. According to Janvier-James (2012:200) case study research examines a contemporary event in-depth and in its natural setting. According to Briggs and Flemming (2007:320) case study research is often qualitative and pays attention to a wide range of factors in a limited number of examples, including "individuals, groups, organisations, movements, events, or geographic units. The study employed primary and secondary data collection methods. For primary data collection, the researcher used semi-structured interviews.

## **1.7 Limitations and Delimitations of the study**

The study encountered the limitations and delimitations outlined in the following paragraphs.

The study utilised purposive sampling technique to target participants. This technique posed a challenge in that participants in purposive sampling tend to manipulate the data that is being collected. For instance, when interviewing officials from the SCM unit on their perceptions about the efficiency and effectiveness of SCM in the department, responses were more defensive than objective, as they needed to reflect and make comments about their own work and also about an area that they oversee. However, the researcher managed to obtain a deeper understanding of the topic under study through the application of the probing mechanism, which at the end assisted the researcher in uncovering the issues or challenges experienced by the SCM unit.

Although the case study design enabled the researcher to focus on issues that were key in understanding the processes and challenges of health infrastructure SCM in GDID, the choice of a case study was also another limitation for the study. The research case study was limited to the Gauteng Department of Infrastructure Development Health Infrastructure SCM employees, making it difficult to create any generalisation that applies to the rest of the SCM department. Although this is the case, the findings of the study can be utilised as a baseline when conducting broader and representative research of a similar nature.

Despite the aforementioned limitations and delimitations, the researcher was able to gather substantial information that provided insights and understanding into the processes and challenges faced by the health infrastructure SCM department within the GDID.

## **1.8 Ethical implications**

There is a fundamental moral obligation to treat respondents of any study involving the collecting of data from people by principles and values that uphold their inherent humanity (Oliver 2010:12). The researcher conducted the study in an ethical way from the start to the end. The following are the types of ethical considerations that were upheld by the researcher.

### ***1.8.1 Seeking permission***

Getting permission was the first rule that the researcher followed when conducting the study. It was the researcher's duty to make sure that the GDID and the Faculty of Economic and Management Sciences ethics committee at the University of Pretoria both gave their consent. This was mostly done to make sure the research followed the university's guidelines and to let the GDID gatekeepers know why the study was being conducted.

### ***1.8.2 Informed consent***

Ensuring participants are informed about the study and its associated hazards is crucial for researchers when gathering data from them. Research participants were given consent forms to sign to ensure that their participation in the research was voluntary and that all required explanations and clarifications were made before the actual interviews. This was done to avoid problems that may unexpectedly arise in the

future regarding this ethical issue. Furthermore, the study also upheld the ethical principle of avoidance of harm to ensure that the outcome of the study did not cause any harm to the participants.

### **1.8.3 Voluntary participation**

In social research, the researcher typically examines people's interactions or lifestyles. Nonetheless, the majority of people find it awkward to talk to strangers about their personal experiences. Therefore, the researcher ensured that the respondents did not feel any duress to participate in the study and that their participation was voluntary.

### **1.8.4 Confidentiality**

The state of maintaining or being kept hidden or private is referred to as confidentiality. It may also imply maintaining authorised constraints on information access and dissemination (Maurer *et al.* 2012:209). Thus, the researcher ensured that the participants' identities and the information they divulged were kept anonymous and safe from inappropriate use. This was achieved through using codes in naming the participants during the data presentation. In addition, the researcher made sure that the participants' job titles were not included in the research report.

### **1.8.5 Avoidance of harm**

Avoidance of physical or emotional harm is also an important research ethic that the researcher needs to consider. The researcher ensured that the interviews were conducted online during tea and lunch breaks to avoid harm to the organisation. In addition, the researcher ensured that he did not harm the participants by asking questions with which they were not comfortable. The researcher carefully chose the words to be used during his interaction with participants to ensure that the participants did not feel intimidated or judged. In addition, harm to the participants was avoided by adhering to research ethics and by respecting their dignity.

## **1.9 Significance of the study**

This study aimed to explore the challenges faced by the health infrastructure SCM in the Gauteng Department of Infrastructure Development. SCM, having gained the attention of many scholars over the past several years, has played a key role in business efficiency. This study contributes to the existing literature by examining

policies governing health SCM. Furthermore, this study makes an important contribution to health SCM policymakers in general by showing them areas where there are discrepancies in policies so that they know where and what to improve. This research also serves as a valuable resource for future academics and researchers who wish to explore further studies in this field. Lastly, this study will contribute to the body of knowledge of supply chain theory in the discipline of public administration.

### **1.10 Framework of the research**

The study comprised of five chapters chronologically arranged as follows:

#### **CHAPTER ONE: INTRODUCTION AND BACKGROUND**

This chapter encompasses a detailed outline of the research problem and aims, background, research objectives, research questions, limitations and delimitations of the study and significance of the study.

#### **CHAPTER TWO: CONCEPTUALISING SUPPLY CHAIN MANAGEMENT IN THE DISCIPLINE OF PUBLIC ADMINISTRATION**

This chapter provided literature on the concept of SCM within the context of public administration. Health infrastructure SCM challenges are also provided in this chapter. The theoretical frameworks that underpin this study are further reviewed in this chapter.

#### **CHAPTER THREE: LEGISLATIVE AND POLICY FRAMEWORK THAT UNDERPIN SUPPLY CHAIN MANAGEMENT**

Chapter three focusses on the legislative framework that influences health infrastructure SCM. The legislative framework guides the implementation of SCM processes.

#### **CHAPTER FOUR: RESEARCH METHODOLOGY**

The chapter outlined the methodology underpinning the study. A case is thus made for the use of qualitative data collection through semi-structured interviews. The research design, strategy, and data collection methods are also discussed in this chapter.

#### **CHAPTER FIVE: RESULTS AND DISCUSSIONS**

This chapter presents the research findings and discussions from the analysis of data collected during the study. The findings of the study are thematically analysed. This analysis and discussion of the findings covers the following thematic areas: 1) The challenges faced by the health infrastructure SCM within the GDID; 2) the perceptions and experiences related to the health infrastructure SCM within the GDID; and 3) the role of various stakeholders in the health infrastructure processes at GDID.

## **CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS**

This chapter draws the study to a close by providing a summary of the contents of the previous chapters, as well as a summary of the key findings of the study. The chapter also makes recommendations on how the GDID can overcome its challenges and maximise its impact on health infrastructure, as well as suggestions for future research.

### **1.11 Chapter summary**

As the first chapter of the research report, this chapter introduced the readers to the research study and explained its background. The chapter identified a research problem and gaps in existing knowledge about the topic under study. The aim, objectives, and research questions were elucidated in this chapter. A qualitative research approach, a case study design, and both secondary and primary data collection methods were identified as suitable for the study. The chapter explained the ethical principles guiding the study and towards the end, the researcher explained the significance of the study. Therefore, the next chapter discusses literature and theories that underpin the study.

## CHAPTER 2

### CONCEPTUALISING SUPPLY CHAIN MANAGEMENT IN THE DISCIPLINE OF PUBLIC ADMINISTRATION

#### 2.1 Introduction

Chapter 1 of this study provided a background to the problem statement forwarded. The study intends to examine GDID's health infrastructure SCM practices generally, with a particular focus on the CMJAH. Accordingly, this chapter forwards information pertaining to SCM within the context of Public Administration. A theoretical framework is provided with a further focus of concepts as it relates to SCM.

Public administration oversees procurement processes for acquiring goods, services, and infrastructure, similar to private sector SCM. However, in the public sector, procurement processes are subject to specific regulations and guidelines aimed at ensuring transparency, fairness, and accountability. In essence, Public Administration and SCM both emphasise the importance of performance measurement and accountability. Furthermore, the chapter reflects on some of the challenges faced by SCM.

#### 2.2 Public administration

The field of administration, according to Rosenbloom *et al.* (2022:20) deals with the organisation, management procedures, and powers and challenges involved in putting policies and programmes into action. The primary governance policies are determined by a legislature, a board of directors, or another policy-making body. This does not, however, imply that the administrative part of the organisation is indifferent to law and policy. Similarly, Cloete (1986:35) defines public administration as an area of activity as well as a group of distinct activities (six generic functions: organising, finance, staffing, processing, and control, as well as policy and policymaking). In all large enterprises, whether commercial or government, there is a growing reliance on professional administrators for guidance and offered projects (Felser 1980:04).

As stated by Rosenbloom *et al.* (2022:05) public administration is the use of managerial, political, and legal theories and processes to fulfil legislative, executive, and judicial mandates for the provision of governmental regulatory and service functions. Thornhill (2006:793) states that the study of public administration has historically focused on the administrative tasks involved in governing and the administrative needs to implement governmental policy. Lapuente and Van de Walle (2020:462) explains that public administration aims to convert written laws into altered social behaviours, converting words into deeds and concepts into observable outcomes. Therefore, in order to comply with regulatory requirements and provide the promised advantages to the intended recipients, administration is in charge of converting these paper statements of purpose into actual behavioural changes. Public administration, according to Felser (1980:09) is the management of governmental affairs. It is also administration, which is a type of work that may be found in any large-scale company. In all social activity, no matter how simple, three stages may be recognised, however, in the modern world, the complexity of the institutions that have been shaped to fulfil the current social aims often obscures this fact.

The goal of public administration is to transform written laws into altered social conduct, to translate words into deeds, and to transform form into content. Therefore, to comply with legal requirements and provide promised advantages to the intended beneficiaries, the administration is in charge of converting these paper declarations of purpose into real behavioural changes (Felser 1980:02).

### **2.3 Supply Chain Management in Public Administration**

SCM has garnered the interest of numerous academics in recent years and has played a key role in business efficiency, according to Janvier-James (2012:194). Miao *et al.* (2010:31) agree with Janvier-James (2012:194) that SCM is a business idea that has recently acquired a lot of attention. SCM manages the tasks of obtaining products, converting them into intermediate and completed commodities, and distributing those finished goods to customers. Despite the supply chain's prevalence in literature from the academic and business worlds, there is still a lot of confusion about what it entails. SCM is sometimes referred to as a management philosophy or management process, although it is defined as an operational concept that deals with the flow of materials and products. SCM is a sort of integrated system that strikes a balance between

vertical integration, autonomous identities, and management philosophy, on the one hand (Sienkiewicz-Małyjurek *et al.* 2024:1880).

As stated by Gansler *et al.* (2004:133) SCM encompasses the administration and oversight of all resources, encompassing not only raw material procurement but also the delivery of end goods to consumers, including financial resources and associated information. These definitions illustrate several literary sources' unique points of view. Although there are various definitions of SCM, they may be broken down into three groups: management processes, management processes implemented, and management philosophies (Klemencic 2006:200; Lambert 2006:88). The product flow that must be provided to consumers or businesses by passing through multiple organisations is the source of the phrase "supply chain." SCM is the planning and coordination of all the processes that go into building supply networks. While SCM has historically concentrated on tangible products, it can also be used in the realm of public administration, where information flows predominate (Van Veenstra *et al.* 2009:426).

According to Nkwanyana *et al.* (2020:01) SCM was established as a remedy for the flaws in old public sector procurement methods. Since its beginning, research has identified some anomalies and shortcomings in this sector's SCM acquisition management procedures. The RSA government was made aware of several issues regarding previous procurement processes prior to 2003. These systems were mostly said to be connected to egregious errors. Among the disorders of these previous procurement models were inadequate responsibility and auxiliary organisations, disjointed procedures, and uneven implementation of regulations (Nkwanyana *et al.* 2020:1).

As a result, a lack of infrastructure development and disregard for delivering services emerged. Consequently, changes were required, and SCM was implemented. SCM was presented as a potent tool to help and correct the anomalies of previous public sector procurement models. Given that it complies with internationally recognised best practices, it was said to hold the possibility of improved procuring processes in South Africa (SA) (Migiro & Ambe 2008:231).

## **2.4 Supply Chain Management challenges**

Supply chain management encompasses the coordination of sourcing, procurement, production, logistics, and distribution activities to guarantee the delivery of products or

services to clients (Sienkiewicz-Małyjurek *et al.* 2023:40). Numerous hurdles can emerge in efficiently managing these intricate networks. In hospitals, the management of the supply chain, particularly concerning infrastructure, poses distinct challenges owing to the critical role of healthcare delivery and the intricate nature of healthcare settings. Primary challenges encountered in supply chain management are as follows:

#### **2.4.1 Supplier Relationships and Dependencies**

Relying on external suppliers introduces risks associated with quality, reliability, lead times, and geopolitical factors. Effective management of supplier relationships is essential to ensure a consistent supply of raw materials and components. Establishing strong, trusting relationships fosters collaboration and co-dependency. Organisations employ various types of partnerships, some recognised through contracts, while others are based on informal understandings. In practice, most relationships incorporate both formal and informal elements. Regardless of their formal or informal nature, it's crucial to evaluate the outcomes of these relationships regularly. Adjustments to the arrangements should be made as circumstances or the expectations of parties evolve. In essence, active management of the relationship is necessary (Rogers 2006:43).

According to Okoumba *et al.* (2020:298) enhancing the sharing of information and fostering quality communication among members within a supply network plays a crucial role in cultivating advanced inter-organisational learning. This, in turn, enhances the collaborative aspects within the network. Activities focused on collaborative networking between organisations are closely associated with an enhanced communication of information, expertise, and operational strategies, ultimately leading to enhanced performance.

#### **2.4.2 Supply Chain Visibility and Transparency**

An absence of all-encompassing visibility across the entire supply chain can impede decision-making and responsiveness to disruptions. Enhancing transparency through mechanisms such as data sharing, collaborative platforms, and real-time tracking technologies is critical for reducing risks and increasing agility. In modern supply chains, complexity is rising, and the ability to access key information and foster

collaboration across organisational boundaries is increasingly recognised as essential in the long run competitiveness of the supply network (Bartlett *et al.* 2007:294).

Anytime SCM procedures lack openness, there could be numerous hazards. These risk concerns are frequently linked to knowledge gaps, competence deficiencies, and corruption in hospital SCM procedures. This frequently leads to subpar service delivery when combined with the ambiguity around the powers, responsibilities, and functions of elected public officials and administration (appointed public officials) (Sibanda *et al.* 2020:05).

Complex supply chains, marked by uncertainties and risks, define today's economic landscape. Effectively managing these complexities necessitates the establishment of resilient and adaptable structures and processes, underpinned by information transparency. This transparency facilitates improved decision-making, particularly during times of global crises (Freichel *et al.* 2022:453).

Businesses must first invest in supply chain visibility in order to get supply chain transparency. This includes creating or commissioning studies, conducting audits and interviews, and outlining their supply chain procedures. Through improved operational decision-making, these supply chain visibility investments have a positive financial impact (Sodhi & Tang 2019:2947).

Bvuchete (2020:40) illustrates that sharing information is basically an action that produces visibility. Supply chain performance is enhanced, and decision-making is made easier by this visibility. Prior research has indicated that supply chain visibility is perceived differently by various stakeholders, as evidenced by studies conducted by Christopher and Lee (2004), and Kaipia and Hartiala (2006). Bvuchete (2020:40) further proposes that achieving supply chain visibility entails sharing superior knowledge that is reliable, fast, accurate, helpful, and presented in an easily accessible format. This indicates that supply chain visibility depends on both the sharing of information and its quality. Consequently, improved visibility within a supply chain enables members to accurately perceive the current state of the supply chain (Asamoah *et al.* 2023:442).

### **2.4.3 Risk Management and Resilience**

Supply chains face a myriad of risks, spanning from natural disasters to geopolitical instability, cyber threats, and supplier disruptions. It is imperative to develop robust risk management strategies and construct resilient supply chains capable of adapting to unforeseen events. Risks have the potential to disrupt operations, sending ripple effects throughout the interconnected network of supply chains (Gurtu & Johny 2021:02).

According to Sienkiewicz-Małyjurek *et al.* (2024:65) practitioners often perceive academic debates about the nature and scope of supply chains or SCM as purely theoretical. However, in actuality, entrenched operational practices persist and regularly resurface in discussions on the topic. Nonetheless, if SCM truly embodies its claims of being interdisciplinary, inter-organisational, and globally pervasive, then these traits must be recognised and taken into account when analysing supply chain vulnerability and developing risk management strategies (Peck 2010:197). Conversely, within hospitals, supply chains are evolving into extensive networks, with network partners growing increasingly reliant on each other (Blom & Niemann 2022:02). This interconnection signifies a shared dependency on each other's actions and endeavours. Therefore, the reputations of the other network partners could be in danger if one of them behaves badly.

Considering the diverse elements within supply chains and the multifaceted nature of SCM, it's pertinent to begin by asking: "What exactly is vulnerable or at risk?" Is it carrying out a certain procedure or set of tasks? Which is it—the health of an organisation, a business partnership, or the larger networks collectively? Alternatively, should the focus be on the one or more of these creatures' susceptibility to external harmful forces? In reality, supply chain vulnerability encompasses all of these aspects. The challenge arises when concepts of risk and risk management are introduced, as they can sometimes blur the distinctions (Peck 2010:197).

Hospitals face a multitude of risks, spanning from operational and financial hazards to reputational concerns (Blom & Niemann 2022:03). Reputational risk can be mitigated through traditional contractual commitments regarding agreed service standards, encompassing availability, quality, and cost. Partnering programmes can also play a role in reputational risk management, involving collaborative efforts among network

members to reduce such risks, known for their effectiveness. In handling supply chain risks, building resilience in the supply chain is essential. (Senna *et al.* 2021:02).

#### **2.4.4 High Cost of Infrastructure**

Acquiring and maintaining healthcare infrastructure, such as medical equipment, IT systems, and facility upgrades, can incur significant expenses. Constraints posed by limited budgets and competing priorities often present challenges in allocating resources for infrastructure projects, potentially resulting in delays or compromises in quality. Furthermore, higher costs may arise from the need for monitoring security situations in certain areas, which could entail significant risks when visiting construction sites, and limited planning capabilities associated with such circumstances (Collier *et al.* 2013:05).

As the expenses associated with supply chain procedures continue to rise, the overall cost of healthcare delivery is on a steady incline. Healthcare institutions are thus compelled to streamline their operations, concentrating on cutting costs, improving processes with added value, benchmarking the quality of products and services, and encouraging solid collaboration with their vendors. This concerted effort aims to ensure the provision of top-notch services to patients. Research has underscored the healthcare industry's need for efficient infrastructure SCM (Pal *et al.* 2022:2880).

Healthcare supplies encompass a wide range of items, including infrastructure, wheelchairs, laundry and cleaning supplies, medical exercise instruments, homecare items, and information systems. SCM encounters a significant challenge in the healthcare sector: balancing customer satisfaction with price demands. The key to addressing this challenge and enhancing service quality lies in innovation and gaining a competitive edge. Supply chain innovation involves navigating through various environmental uncertainties to offer better solutions for customer needs and devising new and improved methods to leverage advanced technologies. Supply chain ingenuity contributes to achieving supply chain performance by creating successful consumer value (Pal *et al.* 2022:2880).

#### **2.4.5 Long Lead Times for Equipment and Supplies**

Procuring medical equipment and infrastructure components often involves lengthy lead times for procurement, installation, and commissioning. Hospital supply chain

managers face the challenge of accurately forecasting future needs and planning procurement timelines to ensure the timely availability of critical infrastructure. The procurement process itself can be time-consuming, requiring internal customers to define needs and develop cost estimates (Mshiu 2021:13). Additionally, public entities conducting tenders may prioritise internal objectives such as efficiency, cost-effectiveness, and timely delivery of goods or services. However, they also must balance these objectives with the broader goals and demands of the public, which may sometimes conflict (Mshiu 2021:13). Bvuchete (2020:08) argues that existing management systems and practices within public healthcare supply chains are increasingly struggling to manage the escalating complexities arising from low forecast accuracy and demand variability. This situation frequently results in a shortage of medications, poor healthcare outcomes, high supply chain expenses, and inefficient operations.

#### **2.4.6 Lifecycle Management and Maintenance**

According to Fargnoli *et al.* (2014:21) hospital infrastructure necessitates continuous maintenance, upgrades, and replacements to uphold optimal performance and adhere to regulatory requirements. Effectively managing the lifecycle of infrastructure assets, which involves planning for replacement cycles and implementing preventive maintenance, is crucial but often resource intensive. Moreover, the significance of maintenance in the realm of green manufacturing is notable. Maintenance plays a vital role in “sustainable manufacturing,” and maintenance management approaches are recommended to enhance production systems. Fargnoli *et al.* (2014:22) underscore the importance of selecting appropriate maintenance strategies to enhance the environmental performance of production systems.

Because hospital infrastructure in South Africa has a shorter design life than new construction, maintenance regimes have higher emission values than new construction. Proactive maintenance techniques can also greatly improve an infrastructure's environmental sustainability, which in turn has positive effects on the economy and society (Blaauw & Maina 2021:13). The GDID is currently undertaking efforts to revive its infrastructure technology systems, including the Archibus system, aimed at ensuring the efficient management of provincial public assets throughout their entire life cycle (Department of Infrastructure Development 2022:20).

#### **2.4.7 Constraints and Facility Utilisation**

According to the Department of Health (2022:08) numerous hospitals struggle with limitations attributed to rising patient volumes, evolving healthcare delivery models, and shifting regulatory demands. Balancing the optimisation of utilisation, facility layout, and workflow design alongside meeting infrastructure requirements poses significant challenges for supply chain managers. In many construction projects, the availability of sites is restricted, necessitating careful planning while plans for material acquisition and storage layout were being developed. The necessary location for storage areas must be considered while purchasing materials. Using just-in-time deliveries of modest material amounts could help construction projects overcome the site's limited availability., necessitating enhanced coordination with suppliers (Said & El-Rayes 2013:292). People known as primary health care facility managers run primary healthcare clinics in South Africa. These clinics can be as small as one room with two staff members in rural areas or as large as ten rooms with around ten staff members in metropolitan areas (Muthati *et al.* 2020:304).

There are significant regional differences in the ordering processes for both clinical and non-clinical items, SCM delegations, assistance for facility managers in their procurement efforts, and delegations on spending at the facility level. A facility budget must be available for the managerial task of ordering equipment. Financial resources should be allotted by the district based on the requirements of each specific institution. The facility managers should next create controls to ensure reasonable budget utilisation and expenditure, and they should enquire with the district about any financial disparities (Muthati *et al.* 2020:304).

As stated by ENCA YouTube (2022) in August 2020, the Public Protector (PP) visited six hospitals as part of site inspections in response to media reports regarding subpar care provided by Gauteng health facilities in 2020. This included an examination of the CMJAH site before the tragic fire. The PP discovered that administrative shortcomings at the Gauteng Department of Health caused systematic problems in the provision of primary healthcare services. A few of the findings and supporting data indicated systemic flaws, including the holdup in hiring new employees and filling open positions. Additionally, it discovered shortages of soap, problems with the quality of certain personal protective equipment PPE that was purchased, and delays in the distribution

of PPE. Additionally, there were delays in the purchase and upkeep of medical supplies (Parliament of the Republic of South Africa 2022:07).

#### **2.4.8 Human Capital and Expertise**

According to Bol *et al.* (2018:1250) hospital SCM demands specialised expertise in healthcare infrastructure planning, procurement, and maintenance. It is essential to recruit and retain skilled professionals who possess knowledge of healthcare regulations, technical specifications, and project management, as they play a critical role in the successful management of infrastructure supply chains. Various human resources management practices influence the impact of human capital on supply chain efficiency and business innovation. Companies that effectively align and balance their human resources management with SCM are likely to enhance their performance (Santa *et al.* 2022:02). In this regard, human resource practices can significantly contribute to the firm's capability in SCM, both within the organisation and across inter-organisational relationships, ultimately driving high performance. This is achieved through the establishment of strategic partnerships, the promotion of intra-organisational and inter-organisational learning, the cultivation of trust, and the fostering of synergy among different involved firms (Coff 2022:107).

The National Department of Health (2023:49) claims that there are numerous issues with South Africa's public health infrastructure, including outdated and sometimes poorly maintained medical facilities that require renovation, repair, and occasionally replacement. Additionally, if there are gaps in service delivery due to past injustices or demographic shifts, new infrastructure needs to be invested in. According to the Department of Health (2023:50) the department intends to allocate a projected R26.9 billion over the medium term to the Hospital Systems programme in an attempt to solve this. The national health insurance indirect grant's health facility revitalisation component will be awarded the remaining amount, with R22.2 billion going to the provinces through the health facility revitalisation grant.

To address these challenges effectively, a strategic approach is necessary. One that integrates SCM seamlessly with overall hospital operations, clinical workflows, and organisational objectives. Collaboration among supply chain managers, facility managers, clinical staff, and administrative leadership is vital for overcoming infrastructure supply chain hurdles and guaranteeing the provision of high-quality

patient care. Through adept management of these challenges, organisations can optimise their supply chains to meet customer expectations, gain competitive advantage, and foster sustainable growth.

Due to a collapsing economy brought on by widespread corruption and political unrest, among other factors, Zimbabwe is among the global south's nations with the highest inflation rates in the world (Maramura *et al.* 2021:622). A very intricate lack of financial responsibility, transparency, inefficient internal controls, and unethical behaviour are all contributing factors to the phenomena of corruption in supply chain management systems. The Harare City Council (HCC) has failed to lead local development and provide services to many urban inhabitants as a result of corruption infiltrating Zimbabwe's local governments (Muronzi 2019:116).

According to the 2017/2018 Auditor General (AG) Report on local councils, HCC was plagued by corruption, which hindered the supply chain unit's ability to carry out its responsibilities for the good of urban residents. In their research, Maramura and Ruwanika (2023) provide more the terrible consequences of corruption in Zimbabwe's public procurement procedures, which negatively impact the execution of projects in a number of local councils.

The difficulties facing Zimbabwe's public procurement systems are similar to those facing the South African public sector, where Maramura and Shava (2021:623) affirms that supply chain management issues for local councils are caused by an unpredictable and volatile environment. Their justification is based on the notion that corruption is a problem that negatively impacts local governments' ability to provide public goods and services. The HCC needs to redefine itself against the backdrop of widespread corruption and nefarious adherence to laws governing service delivery, which is leading to subpar service delivery (Muronzi 2019:118).

To better understand the framework governing the study, it is essential to examine the relevant legislative prescripts. The following paragraphs explain the National Treasury Strategic Plan.

## 2.5 National Treasury Strategic Plan

Lichocik and Sadowski (2013:124) propose that an organisation can acquire efficiency through the adoption of quality-strategic decisions that establish the foundation for future operations. According to these writers, a low-cost, low-connection, low-step supply chain that ensures the delivery of high-quality goods and services is an efficient supply chain. Conversely, according to Bester (2007:7) an organisation's efficiency is measured by its capacity to accomplish its goals using the resources that are at hand. Realising results could be seen as the definition of effectiveness. According to Isoraite (2005:240) an action's effectiveness is correlated with its results, outputs, and ability to accomplish its objectives.

The National Treasury Regulations (NTR), which state that supply chains must be managed in a way that complies with the concepts of efficiency and effectiveness, are the basis for SCM. As a result, SCM is a legal mandate designed to improve the procurement environment's efficacy and efficiency (Nkwanyana *et al.* 2004:4).

Thus, SCM was implemented as a transition to improve customer service while repairing the past's inconsistencies. According to the National Treasury Regulations (2005:49) fairness, transparency, cost-effectiveness, and competitiveness were thought to put SCM in a better position to fight fraud, guarantee improved financial management, direct public servant behaviour, and encourage inclusivity of those who were previously disadvantaged. Based on the aforementioned rationale, SCM has been recognised as having the potential to enhance public procurement procedures (Ambe 2009:73). As a result, Dlova and Nzewu (2014:08) consider it to be the cornerstone of service delivery.

To mobilise resources and raise South Africans' quality of living, National Treasury aspires to be a trustworthy, brave, and professional partner. Its goal is to fulfil financial management obligations with the highest calibre of research, advice, and implementation possible (Department of National Treasury 2020:03). Below is the organisation and makeup of the National Treasury's nine programmes.

- Programme 1: Administration
- Programme 2: Economic Policy, Tax, Financial Regulation, and Research
- Programme 3: Public Finance and Budget Management
- Programme 4: Asset and Liability Management

- Programme 5: Financial Accounting and Supply Chain Management Systems
- Programme 6: International Financial Relations
- Programme 7: Civil and Military Pensions, Contributions to Funds and Other Benefits
- Programme 8: Revenue Administration
- Programme 9: Financial Intelligence and State Security

### **2.5.1 Programme 5: Financial Accounting and Supply Chain Management Systems**

For the purpose of this study, the focus will be on programme 5: Financial Accounting and Supply Chain Management Systems.

The Department of National Treasury (2020:73) states that the goal of this programme is to support and enforce the transparent, cost-effective, and efficient management of revenue, expenditure, assets, liabilities, and supply chain procedures in the public sector in order to facilitate governance and accountability. The two sub-programmes of this programme are described below.

#### **2.5.1.1 Office of Accountant-General**

In order to strengthen accountability, governance, and supervision, this sub-program seeks to advance the transparent, economical, efficient, and effective management of income, expenses, assets, and liabilities in the South African public sector (Department of National Treasury 2020:73). It will achieve this goal through:

- ❖ Financial Systems: creates and executes the Integrated Financial Management System (IFMS) and maintains and enhances current financial management systems. Within national and provincial departments, this will take the place of outdated and dispersed financial, supply chain, and HR management systems.
- ❖ Financial Reporting for National Accounts: helps all branches of government create consolidated financial statements and put financial reporting standards into place. Monthly oversight of state budgets and spending reports in compliance with the Public Finance Management Act (PFMA) is one of the responsibilities.

- ❖ **Financial Management Policy and Compliance Improvement:** encourages financial management adherence to the PFMA and MFMA by creating guidelines, structures, rules, and instructions. It also offers assistance with implementation across all three branches of government. In the three branches of government, it establishes the risk and controls accounting and financial management practices. It also helps with specialised performance audits and malpractice investigations across all branches of government, as well as technical and other support for institutional capacity building related to financial management.

#### *2.5.1.2 Office of the Chief Procurement Officer*

This sub-programme aims to control the creation of laws and policies pertaining to government procurement systems, cut down on unnecessary spending, and implement efficient and economical procurement practices throughout the government. The office supports and enforces transparent and effective management of state procurement as well as sound stewardship of government assets and resources. As indicated earlier, its goal is to enable the efficient, economical, effective, and transparent use of financial and other resources, including state assets, for improved service delivery (Department of National Treasury 2020:73).

To emphasise, as the largest single spender in South Africa, the government must encourage sound financial management to maximise delivery through the economical and efficient use of scarce resources (Department of National Treasury 2016:03). For any government institution to achieve its strategic objectives and aims, a well-functioning SCM function is essential.

One of the main facets of public financial management and service provision is public procurement. The pressure on government institutions to perform well and show results in terms of organisational performance and service delivery is growing (Department of National Treasury 2016:03). Institutions of higher learning and other government institutions must make sure that the personnel they employ possess the abilities, know-how, and character traits needed to carry out their jobs in a competent manner. In order to help management in accomplishing the organisational mandate, strategy, and goals, the accounting officer must guarantee that the SCM function is

suitably staffed with trained and competent experts (Department of National Treasury 2016:03).

## **2.6 Theoretical framework**

It is imperative to forward a theoretical framework that underpins this study. Theories are ideologies developed to explain a set of realities, particularly if those beliefs have been put to the test and proved reliable enough to forecast an event (Nkwanyana *et al.* 2020:4).

The literature contains a variety of theories and points of view about management and public administration. The New Public Service and New Public Management approaches to public administration, which are most apt for a study of this nature, will be explained in this section. New Public Management (NPM) is adopted as the basis for analysing and understanding SCM better.

### **2.6.1 New Public Service Approach**

Different researchers and practitioners, often at odds with one another, have contributed many components to the New Public Service, similar to the New Public Management. However, a few overarching concepts seem to define this strategy as a normative paradigm and set it apart from others. Many excellent public managers have adopted creative and cutting-edge approaches that embody the New Public Service, both in theory and in reality (Denhardt and Denhardt 2000:552).

"Managing through people" is a key component of the New Public Service's management and organisational philosophy. Performance measurement, process reengineering, and productivity improvement systems are regarded as crucial instruments for managing system design. However, the New Public Service contends that if the values and interests of each individual member of an organisation are not given enough consideration, then reasonable attempts to regulate human behaviour are likely to fail in the long run. Furthermore, even if these methods may provide results, they do not produce responsible, involved, or civic-minded workers or citizens (Ferlie and Ongaro 2022:10). In order to help management in accomplishing the organisational mandate, strategy, and goals, the accounting officer must guarantee that the SCM function is suitably staffed with trained and competent experts (Department of National Treasury 2016:03).

Those in charge of public institutions must treat public servants with respect if they are to treat citizens with the same decency. The significant problems and complexities of public administrator employment are acknowledged in the New Public Service. Public servants are seen not only as participants in a market or as employees desiring the stability and security of a bureaucratic position, but they are also seen as individuals whose motivations and rewards go beyond only security and income. Their goal is to positively impact other people's lives (Osborne *et al.* 2013:140).

Despite its almost thirty-year history, some practitioners still view SCM as a straightforward technology that can be embraced and deployed without strong foundations (Pal *et al.* 2022:2281). This could be one of the causes of SCM's failure in the healthcare industry. SCM in healthcare has received a lot of attention lately because of its substantial influence on hospital performance in lowering waste, medical errors, enhancing service and treatment quality, and increasing operational efficiency.

### **2.6.2 New Public Management**

Avila (2016:04) defines New Public Management (NPM) as:

“A public management system with greater emphasis towards the applicability of ideas, mechanisms and techniques from the private sector in order to implement them within public institutions”.

NPM is essentially the philosophy behind the most recent paradigm shift in public sector governance. The insights from the fields of law, economics, and game theory are included in the framework of new public management. NPM adds contractualism, a new method of public sector governance, rather than replacing more traditional frameworks (Matheson 2001:120). Denhardt and Denhardt (2000:551) believe that NPM is more than just applying new methods; it also brings new values, particularly values that are primarily derived from the commercial sector.

Whatever forms that public regulation and the supply of goods and services to the general public may take, the government does not directly participate in public governance. Agents handle public sector management on behalf of the government. Principal-agent relationships in the public sector emerge for very fundamental transaction cost reasons. The government is the principal in contemporary public

management, while bureau chiefs, or chief executive officers (CEOs), are the agents. To comprehend modern government, one must have a basic comprehension of principal-agent theory (Matheson 2001:122). According to Muthathi (2020:303) even after 25 years of democracy in South Africa, there are still severe disparities in the availability and calibre of healthcare. One of the main causes of these disparities is the division of health financing between the public and private health sectors. Thus, the most significant health sector reform intended to attain national health coverage is the implementation of a National Health Insurance (NHI) system.

The National Department of Health (NDoH) initiated the rollout of the NHI across 11 pilot districts, divided into three phases spanning five years each (Muthathi 2020:303). The initial phase, starting in 2012, focused on enhancing primary healthcare without introducing new health financing models. One of the key initiatives within this phase was the Ideal Clinic Realisation and Maintenance (ICRM) programme, aiming to enhance the quality of primary healthcare as a precursor to the National Health Insurance implementation. The findings of a 2011 health facility audit, which revealed inadequate infrastructure and quality standards at healthcare facilities, influenced the decision to launch the ICRM programme. Additionally, examinations carried out by the Office of Health Standards Compliance made clear where National Core Standards were not being met (Muthathi 2020:303).

As a completely new approach to public sector governance, NPM holds a few very specific views about how to effectively carry out the duties of government. It theorises the function of incentives and norms in organisations and is based on important concepts in economics, particularly institutional economics and the economics of information. Consequently, NPM would utilise subsequent market-driven mechanisms:

#### *2.6.2.1 Policy–provision split and purchaser–provider split.*

Because governments are involved in a wide range of activities, it is critical to separate the allocation component of their programmes. It is common to wonder if the market could provide goods and services more effectively when the government produces them. Regulatory responsibilities must be separated from allocation programmes, and outsourcing is an option for service delivery (Lane 2002:09).

The National Department of Health has instituted a programme titled the Hospital System, aimed at formulating national policies regarding hospital services and

delineating responsibilities according to the level of care. Its objectives include establishing precise guidelines for referrals and enhancing communication channels, devising comprehensive plans for individual hospitals, and facilitating the implementation of quality improvement initiatives (Department of Health 2023:85). Moreover, the programme oversees the management of the national tertiary services grant, ensuring that health infrastructure planning, coordination, delivery, and supervision align with the country's healthcare requirements. The programme is comprised of two subsidiary budget programmes, as detailed below:

- **Health Facilities Infrastructure Management:** This sub-programme coordinates and allocates funds for healthcare infrastructure, empowering provinces to strategise, oversee, modernise, streamline, and innovate infrastructure, healthcare technology, and hospital administration, aiming to enhance the standard of care. Additionally, it oversees the direct health facility revitalisation grant and manages the health facility revitalisation aspect of the national health insurance indirect grant.
- **Hospital Systems:** This sub-programme concentrates on modernising and restructuring the delivery of tertiary hospital services. It identifies tertiary and regional hospitals to act as hubs of excellence for sharing best practices in quality enhancement. Furthermore, it oversees the administration of the national tertiary services grant (Department of Health 2023:85).

#### 2.6.2.2 *Contestability*

The separation of allocation from regulation and income maintenance makes it possible to test the production of products and services on the market. Governments should use competitive tendering or bidding for all services they wish to offer, as contestability arises when entrance is open (Lane 2002:09). Despite the implementation of SCM systems, the efficiency of procuring, tendering, and sourcing goods and services in South African hospitals remains problematic (Sibanda *et al.* 2020:02). SCM plays a crucial role in acquiring and delivering goods, services, and infrastructure to meet the needs of citizens and is fundamental to public administration. Accountability is required of public institutions when they acquire, manage, and part with investments and assets of public interest. Practitioners must follow SCM laws,

rules, practices, and processes in a way that is visible and available to all bidders in order to ensure fair competition (Sibanda *et al.* 2020:02).

Rooted in its NPM origins, SCM is built on the principles of contracting out and outsourcing procurement. It encompasses various facets, including contract administration, risk management, performance evaluation, supplier management, costing and pricing models, procurement procedures, tender evaluation systems, logistics, and principal-agent relationships. Its primary goal is to enhance efficiency and accountability (Sibanda *et al.* 2020:02). Consequently, SCM officials in public hospitals are expected to exercise their discretion fairly, responsibly, and honestly throughout the bidding process. This necessitates the promotion of transparency and accountability throughout the tendering process.

### 2.6.2.3 Contracting

According to Lane (2002:10) the government will likely make extensive use of its public procurement arm if competitive tendering is used for allocation. Lane further argues that the government enters into contracts both with and without alternative service providers. It could establish a buyer-provider system to manage an industry as a whole or a specific governmental level, like municipal government. Bvuchete (2020:68) highlights that the procurement system employed in the public healthcare supply chain in South Africa is primarily based on tendering. As noted by Fonseca & Azevedo (2020:430) successful outcomes of this public tendering process result in contracts being awarded to manufacturers and producers of medical drugs or medical devices.

In 2003, the cabinet endorsed a SCM policy, which was integrated into the National Treasury Regulations. This policy aimed to rectify shortcomings in the public procurement processes, formerly known as the tender board system. Its objectives included promoting principles of good governance and aligning with the equity policy objectives of the South African government. Additionally, the policy introduced internationally recognised best procurement practices (Sibanda *et al.* 2020:02).

The foundation of NPM and new institutional economics is accountability, which is also the basis for outsourcing. On the other hand, contracts between the government, vendors, and contractors form the foundation of public contracting, rooted in the principle-agent theory (Sibanda *et al.* 2020:04).

As per Parliament of the Republic of South Africa (2022:08) there was a deficiency in contract management concerning waste disposal at the CMJAH, potentially leading to the service provider benefiting for 4 years without undergoing a competitive process. Due to poor performance by the service provider, there were delays in the storage, collection, and disposal of medical waste at the hospital.

#### 2.6.2.4 Incorporation

The ideal way to handle business matters under government is to use private legal instruments, like joint stock companies. The best way to manage public enterprises is as incorporated companies with potential private equity ownership. Any organisation that allocates resources and has a source of income, such as a hospital, is eligible to be included (Lane 2002:10). As part of a continuous improvement initiative, the DID has initiated efforts to align its operations with the ISO 9001:2015 Quality Management System, with the goal of achieving certification by 2024. This endeavour is aimed at enhancing integration, efficiency, and effectiveness of infrastructure delivery. To attain the desired results, a quality audit has been conducted to identify organisational gaps, and the department is currently implementing the recommendations derived from this audit (Department of Infrastructure Development 2022:19).

According to Thornhill *et al.* (2017:09) the idea of NPM was introduced in the 1990s in an attempt to redefine the public sector's purview, which sparked some new discussions. Margaret Thatcher's desire for the public sector to become more like a business led to the rise in popularity of the NPM idea during the 1980s. The New Public Management (NPM) model of public administration, akin to the New Public Service approach, is based on democratic norms and principles. It suggests that public servants ought to engage in closer collaboration with society to remain relevant and responsive.

Furthermore, hands-on professional management is promoted with the New Public Management method, according to Kalimullah *et al.* (2012:12). Managers who are empowered to make decisions pertaining to their areas of work with their own discretion must exhibit visible and aggressive leadership. Since the public manager must actively participate in resolving challenges locally, they should assume control over the public service delivery mandate that has been delegated to them. They add that needless red tape, inoperable operating procedures, or set rules and regulations

should not impede the efficient delivery of public services or advancements in their quality. This strategy encourages the use of specific performance standards and metrics.

To hold public sector institutions accountable for their actions and resource usage, goals and targets must be established and quantified. The goal of this strategy is to advance the culture of ongoing quality improvement for the public services that are provided or rendered. As a result, outcomes are prioritised over procedures (Kalimullah *et al.* 2012:13). Accountability necessitates that SCM public officials are obligated to provide an account of, report on, explain, and justify their activities, and also accept responsibility for them (Sibanda *et al.* 2020:02).

NPM emphasises the adoption of private sector management practices, which implies that the public sector should behave in line with business principles when offering goods and services to the general public. The NPM approach recommends a more flexible approach to recruitment and the responsibilities associated with it. This improves the effectiveness of providing public services. Greater focus is also placed on the application of cost-cutting strategies in public organisations when allocating and utilising resources (Kalimullah *et al.* 2012:12). SCM is a fundamental aspect of public administration practice, employed by public officials to tackle public issues within the administrative state (Trammell *et al.* 2019). Theoretically, SCM is grounded in the principles of the New Public Management paradigm (Sibanda *et al.* 2020:04).

According to Thornhill *et al.* (2017:158) the NPM approach recommends that public sector organisations modify private sector business practices to fit the needs of the public sector. This is mostly because private businesses are thought to use resources more effectively than public ones. The NPM model encourages collaborations between the public sector, private sector, and civil society organisations, all of which are critical to improving the delivery of public services.

### **2.6.3 The central themes of NPM**

According to Rondinelli (2007) the central themes of NPM are as follows:

- An intensified emphasis on financial oversight, cost-effectiveness, and efficiency improvement.

- Implementing a top-down approach, setting and monitoring targets, and delegating authority to senior management.
- Implementing audits at both financial and professional levels, utilising transparent methods to evaluate performance, establishing benchmarks, and employing protocols to enhance professional conduct.
- Enhancing customer focus and responsiveness and expanding the involvement of non-public sector providers.
- Easing labour market regulations, substituting collective agreements with individual compensation packages for senior positions along with short-term contracts.
- Diminishing the self-regulatory authority of professionals and transferring authority from individuals to management.
- Promoting a more entrepreneurial approach to management over democracy, with heightened retrospective accountability requirements.
- Introducing novel corporate governance structures, adopting a board model of operation, and consolidating power within the organisation's strategic core.

#### ***2.6.4 Application of NPM on SCM processes***

New Public Management is useful in this study as it places emphasis on efficiency and performance. NPM advocates for increased efficiency and performance in public sector operations, which can be applied to infrastructure SCM by streamlining processes, reducing waste, and improving the overall effectiveness of supply chain activities. Additionally, NPM emphasises measuring outcomes and results rather than inputs or processes. In SCM, this means prioritising the delivery of goods and services that meet the needs of stakeholders and achieve desired outcomes, such as improved service delivery or cost savings. This means that there is a focus on results and outcomes on both NPM and SCM (Isoraite 2005:241).

NPM often involves decentralising decision-making and empowering frontline managers to make operational decisions. In SCM, this can involve delegating authority to supply chain managers at various levels to make decisions related to procurement, inventory management, and distribution. Moreover, NPM promotes introducing competition and market-like mechanisms into public sector organisations to drive efficiency and innovation. In SCM, this may involve outsourcing certain supply chain

functions to private sector providers, implementing performance-based contracting, or leveraging market dynamics to improve supplier performance (Kalimullah *et al.* 2012:13).

NPM places a strong emphasis on performance measurement and accountability, which can be applied to SCM through the use of key performance indicators (KPIs), performance targets, and regular monitoring and evaluation of supply chain activities. NPM emphasises the importance of customer focus and responsiveness in public sector organisations. In SCM, this means prioritising the needs of end-users and stakeholders and aligning supply chain activities to deliver high-quality products and services in a timely manner Bester (2007:10).

High levels of accountability, adherence to pertinent legislation, responsiveness, transparency, and participation are characteristics of SCM (Senna *et al.* 2024:1368). SCM public officials must be accountable for their actions, report on them, provide justifications and explanations, and take ownership of the results of municipal financial expenditures. Efficiency in sourcing, tendering, and purchasing products and services in South African healthcare facilities is still an issue, even with SCM systems in place (Sibanda *et al.* 2020:14).

The ongoing inability to create, implement, and oversee efficient SCM systems, oversight, internal controls, and financial reporting procedures is a major contributing reason to regressions in public health audit results. Compliance with SCM rules, laws, and legal frameworks needs to be strengthened in light of the frequent occurrences of unnecessary, irregular, and inefficient spending. Effective control and monitoring procedures eliminate unethical behaviour, cut down on waste, and encourage honesty, openness, and responsibility (Sibanda *et al.* 2020:15).

One of the most important NPM policies is outsourcing. Government outsourcing may involve the transfer of operational authority from the government to providers and involves the provision of public services by entities other than the government. Usually, the objective is either strategic, operational, or both. However, strategic aims help to maximise long-term opportunities, while operational use largely accomplishes short-term problem-avoidance goals. There is no denying the significance of strategy in any undertaking. According to academics like Rajabzadeh *et al.* (2008) the organisation's management should strategically decide whether to join into an outsourcing deal.

Under NPM, outsourcing can be seen as one of these strategic tools that benefits public sector entities over the long run (Dadzie *et al.* 2022:181).

NPM has developed into a strong and significant management approach that was taken from the private sector to spur the modernisation and transformation of public sector administration. Using management, reporting, and accounting techniques similar to those used in private enterprise, it embodies public sector entities restructuring. It should come as no surprise that governments in developed economies have found it impossible to resist the principles of NPM in light of recent and upcoming changes in the public sector, particularly in developing nations (Dadzie *et al.* 2022: 186).

Dzadzie *et al.* (2022) provide the following expanded description of the changes NPM has introduced in the public sector:

- Reworking budgets to be transparent in accounting terms, with costs attributed to outputs, not inputs, measured by quantitative performance indicators.
- Viewing organisations as a chain of low-trust principal–agent relationships (rather than fiduciary or trustee–beneficiary ones), a network of contracts linking incentives to performance.
- Disaggregating separable functions into quasi-contractual or quasimarket forms, particularly by introducing purchaser/provider distinctions, replacing previously unified operational planning and provision structures.
- Opening up provider roles to competition between agencies or between public agencies, firms, and not-for-profit bodies

In summary, consumers or citizens have greater control over how public service delivery impacts them when provider responsibilities are decentralised to the smallest practical size. All of these NPM features mentioned above encourage the public sector to employ outsourcing for product delivery. As fiduciary duties have changed, NPM has implemented a management philosophy for public sector organisations that aims to provide high-quality services and improved performance.

From this narrative, outsourcing is the choice made by an organisation to use resources and services from outside the company. Many public sector organisations,

particularly municipalities, use outsourcing to provide public services in order to increase "value for money" (VFM) Farneti and Young (2008). According to Nolan (2001:170) outsourcing has become the logical outcome of public sector entities' efforts to reduce waste and promote efficiency and effectiveness since NPM became the poster paradigm in public administration. However, the evidence suggests that opinions among scholars and practitioners regarding whether outsourcing has improved performance, transparency, and the effectiveness of public service organisations are still divided.

## **2.7 Chapter summary**

Chapter 2 provided a review of Public Administration and its relationship to SCM. The discussions in this chapter indicated the influence Public Administration have on SCM. There is a clear nexus between Public Administration and SCM. While SCM has historically concentrated on tangible products, it can also be used in the realm of public administration. The management of the supply chain in hospitals, particularly concerning infrastructure, poses distinct challenges owing to the critical role of healthcare delivery and the intricate nature of healthcare settings. Therefore, this chapter also reflected on challenges that are encountered by infrastructure SCM. Factors such as supplier relationships and dependencies, high cost of infrastructure, risk management, and resilience are some of the challenges discussed. It was also revealed that because hospital infrastructure in South Africa has a shorter design life than new construction, maintenance regimes have higher emission values than new construction. In an attempt to explore and understand SCM, the study adopted the NPM approach, which puts emphases on the adoption of private sector management practices, which implies that the public sector should behave in line with business principles when offering goods and services to the general public. The next chapter focusses on the legislative and policy frameworks that govern SCM.

## CHAPTER THREE

### LEGISLATIVE AND POLICY FRAMEWORK THAT UNDERPIN SUPPLY CHAIN MANAGEMENT

#### 3.1 Introduction

Chapter Two provided a review of SCM in the context of public administration. The chapter also outlined the challenges encountered in SCM. The GDID derives its mandate from various pieces of legislation. This chapter will delve into the legislative and policy framework that governs SCM within the GDID. The legislative requirements of SCM and SCM policies are complex and impact significantly on the smooth functioning of the government and its competitive position. Numerous variables and a large body of information influence SCM policymaking. Without a legislative framework, political representatives will not be able to make informed and intelligent decisions.

#### 3.2 Legislative and policy frameworks that guide the SCM in South African health department

Legislative frameworks ensuring governance in procurement operations are prevalent because public procurement plays a significant role in government service delivery in South Africa.

The legal framework governing public procurement in South Africa is derived from the unique historical, political, and socioeconomic circumstances of the nation. For instance, governmental procurement lacked business opportunity fairness prior to 1994 since state coffers benefitted just one race. Due to the undemocratic nature of the nation and its goal of economically empowering a small number of people, procurement and tendering were likewise conducted in secret. According to Bolton (2006:194), the government procurement system prioritised large and established companies prior to 1994. For example, this did not include marginalised groups because it was exceedingly difficult for newly founded small enterprises to get into the procurement system. After 1994, the focus of governmental procurement shifted significantly to become more economically inclusive. This necessitated a complete revision of the laws and regulations.

### 3.3 The Constitution of the Republic of South Africa, 1996

Constitutional clauses Section 217 (1) of the Republic of South Africa, 1996 Constitution (Act No. 108 of 1996) establishes the framework for procurement, stating that "any institution identified in national legislation, or an organ of state in the national, provincial, or local sphere of government, that contracts for goods or services, must do so in accordance with a system that is fair, equitable, transparent, competitive, and cost-effective" (Van Gruenen & Van Niekert 2010).

The Republic of South Africa (RSA) Constitution (1996) which is the ultimate legal document in the nation, introduced several measures to guarantee equity in public procurement. "The organs of state may implement a procurement policy providing for categories of preference in the allocation of contracts and the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination," according to Section 217(2) of the South African Constitution, which expressly mentions public procurement.

The Republic of South Africa's Constitution Act 108 of 1996 establishes the fundamental principles for public procurement and contract management, which apply to all branches of government and include fairness, equity, transparency, competition, and cost-effectiveness. State agencies are required to offer contract management and procurement services in compliance with these five constitutional tenets. Tucker *et al.* (2016:1) share the opinions and believe that although the constitution provides clear directives on how public procurement and contract management activities must be conducted, there are still many variables influencing the effective implementation of procurement regulations. The significance of public procurement and contract management was demonstrated when it was granted constitutional status (Mkhize 2023:55).

Contracts and procurement must be handled economically, according to the Constitution. Although South Africa's constitution is thought to be sound, there are many gaps in its application and observance, including noncompliance with procurement management standards (Mkhize 2023:56).

Schedule 4 of the Constitution reflects health services as a concurrent national and provincial legislative responsibility. Everybody has the right to equality, including

access to health care services, according to Section 9 of the Constitution. This implies that people shouldn't be unjustly denied access to healthcare.

- People also have the right to access information if it is required for the exercise or protection of a right;
- This may arise in relation to accessing one's own medical records from a health facility for the purposes of lodging a complaint or for giving consent for medical treatment; and
- This right also enables people to exercise their autonomy in decisions related to their own health, an important part of the right to human dignity and bodily integrity in terms of sections 9 and 12 of the Constitutions, respectively (Department of Health 2023:04)

### **3.4 The Public Finance Management Act of 1999**

The Public Finance Management Act (PFMA) (Act No. 1 of 1999) is one of the most significant pieces of law enacted by South Africa's first democratic administration. In order to maximise service delivery by making the most effective and efficient use of the limited resources, the act supports the goal of sound financial management. The main goals of the Act include modernizing the public sector's financial management system, empowering managers to oversee and hold them more accountable, guaranteeing prompt delivery of high-quality information, and eliminating waste and corruption in the use of public resources (Sibanda & Tshikovhi 2022:3). The PFMA offers a collection of regulations to direct state-owned businesses, national and provincial SCM, and all other government entities to guarantee effective management of their assets, liabilities, and revenue. The Republic's Constitution lists five fundamental principles, one of which states that a successful procurement system must be "fair, equitable, transparent, competitive, and cost-effective." These principles form the basis of the Act (Sibanda & Tshikovhi 2022:3).

Financial matters in national and provincial government departments are governed by the PFMA (Tucker & Kwamukwamba 2020:2). The PFMA encourages the prudent use of budgets by budget entities and the effective use of resources, including the efficient conduct of procurement (Mkhize 2023:57).

The Republic of South Africa's Constitution was followed in the formulation of the PFMA. Its primary goal was to ensure that financial resources are managed effectively

and efficiently by regulating financial management in the federal and local governments. The precise duties and responsibilities of an accounting officer in relation to the administration of public procurement are governed by Section 38 of this Act. Accounting officers are required by the South African National Treasury (1999) to make sure that the departments, trading companies, and constitutional institutions uphold the following (National Treasury 1999):

- “an effective, efficient, and transparent system of financial and risk management and internal control.
- an appropriate procurement and provisioning system that is fair, equitable, transparent, competitive, and cost-effective; and
- effective and appropriate steps to prevent unauthorised, irregular, fruitless, and wasteful expenditure”.

The PFMA, in terms of Section 16A.3.2 concerning public supply chain management, further mandates accounting officers to provide at least the following (National Treasury 1999):

- demand management;
- acquisition management;
- logistic management;
- disposal management;
- risk management; and
- regular assessment of supply chain management”.

According to Hart (2019:1) section 38 of the PFMA states that "An accounting officer may not commit a department, trading entity, or constitutional institution to any liability for which money has not been appropriated," restricting the statutory rules that govern the conduct of the officials entering into contracts as a representative of an organ of state. According to Hart (2019:1) accounting officers are required by Section 39 of this Act to take "effective and appropriate steps to prevent any overspending and to prevent unauthorised expenditure." Concerning disregard for contract management and procurement regulations. Hart (2019:1) goes on to say that the PFMA's

regulations make it abundantly evident that non-compliance—such as spending that is unauthorised, irregular, pointless, or wasteful—is considered financial misconduct and should be handled according to consequence management.

In order to prevent improper expenditure in procurement provisioning, the PFMA ultimately requires accounting officers to develop a procurement system that permits equal treatment of suppliers and encourages openness. It seems that the PFMA guidelines for accounting officers regarding the establishment of efficient procurement processes are still being disregarded, as the GDID still exhibits certain shortcomings in preventing unapproved, irregular, pointless, and wasteful spending on contract management and the purchase of commodities.

According to the Provincial Government (2023:124) by the end of the 2023/2024 term, the GDID will have improved financial management throughout in order to receive a clean audit. Initiatives in this area will also concentrate on strengthening the department's contract management and financial prudence systems, as well as on guaranteeing better adherence to standard operating procedures (SOPs), financial accounting regulations, and SCM guidelines. It is still crucial to review the funding mechanism and recalculate the budget in light of immigration. The agency will keep working to eradicate corruption and fraud from the system while enhancing internal controls, increasing capacity, and facilitating improved financial management. By reviewing internal procedures and controls, training mediators, and putting the mediation model into practice, possible medico-legal lawsuits will also be reduced (Provincial Government 2023:124).

As per the Department of Infrastructure (2022/23:118) the financial statements submitted from the financial year 2013/14 to 2020/21 for auditing were not prepared in accordance with the prescribed financial reporting framework as required by Section 40(1)(b) of the PFMA (1999, as amended). Material misstatements of some disclosure items identified by the auditors in the submitted financial statements were corrected, resulting in the financial statements receiving an unqualified audit opinion. However, the department has significantly improved the quality of the financial statements submitted for audit. During the audit of 2021/2022, financial statements did not have material misstatements. This is due to the improved control environment culture

cultivated through the AG War room and the stringent review of financial statements by both the finance team and internal control unit.

The department failed to implement suitable and effective measures to prevent the irregular expenditures mentioned in the financial statements' notes, as mandated by Treasury Regulation and Section 38(1)(c)(ii) of the PFMA (1999, as amended). To make sure the department complies with procurement laws, compliance reviews are therefore carried out by internal auditors (Gauteng audit services), probity auditors, and internal control units. This procedure has helped the Department make sure that non-compliance is found, stopped, and promptly fixed (Department of Infrastructure Development 2022:119).

### **3.5 The Municipal Finance Management Act of 2003**

The Municipal Finance Management Act (MFMA); (Act No. 56 of 2003) Local government, MFMA 2003 intends to update financial and budgetary management procedures to increase municipalities' ability to provide services to all of their constituents, clients, users, and investors. It establishes a stable fiscal foundation while making clear and distinct the duties and obligations of the mayor, executive and non-executive council members, and other officials. It gives mayors the authority to lead policies and outcomes politically, and it gives municipal managers and other top managers the authority to make sure the municipality has SCM policies and regulations in place and is following them in compliance with chapter 11 of the act (Sibanda *et al.* 2020:02).

A strong, improved, and more responsible local government system is encouraged by the reforms and guiding principles. This system will enable local governments to address the changing needs and difficulties of the many communities more consistently and sustainably they serve (Sibanda *et al.* 2020:03).

On 30 May 2005, new Supply Chain Management Regulations (SCMR) were published in the Government Gazette, Vol. 479, No. 27,636, in terms of the Municipal Finance Management Act (MFMA 56 of 2003). Section 217 of the Constitution mandates that government agencies enter into contracts for products and services that are "fair, equitable, transparent, competitive, and cost-effective". Section 112 of the policy must adhere to this provision. A municipality creates an SCM policy, and the

policy must adhere to a set of specified regulatory frameworks (Dekker 2005:35). In South Africa, supply chain management is currently a key element of responsible municipal finance management (South Africa 2005b:5). The goal of the SCM laws is to ensure that municipalities spend their resources wisely in order to achieve the important outputs and results outlined in their Service Delivery Budget Implementation Plans (SDBIPs) and Integrated Development Plans (IDPs) (Sibanda *et al.* 2020:02).

According to Tumwebaze *et al.* (2018) in order to be held accountable, SCM public officials must report on, explain, and justify their actions as well as take ownership of the intended results. Internal control guarantees adherence to SCM rules and regulations, as well as the efficacy and efficiency of municipal financial reporting. Supply chain management system implementation in South African government organisations has been praised as a step in the right direction that might revolutionise public service delivery and enhance welfare for the general public. Because of this, supply chain management has become widely recognised as the municipal finance reform tactic that can most effectively address rising customer demands for cost-effective, high-quality service delivery (Sibanda *et al.* 2020:02).

But even with SCM policies and procedures in place, most South African hospitals' service delivery efficiency hasn't increased all that much (Mhelembe & Mafini 2019). In South African municipalities, accountability for financial management and performance has declined (Sibanda *et al.* 2020:02).

As prescribed by Section 3 of the MFMA, the health SCM policy is reviewed annually at the GDID. The procurement and contract management processes in the DID still call for substantial improvement. The Department will therefore robustly review these processes in its quest to continue to implement cost containment measures, enhance contract management and realise efficiency gains. According to the (Provincial Government 2023:125), the department will achieve this through:

- Implementing strategic sourcing for the identified commodities by arranging departmental own term contracts.
- A phased-in implementation approach to eradicating procurement of goods and services by means of limiting invitations on price quotations.

- Increased participation in the transversal contracts arranged by the national and provincial treasuries and other organs of state, as this will assist in gaining economies of scale.
- Limiting the procurement of non-essential commodities.
- Implementing a contract management system to flag the expiry of contracts at least twelve months prior to expiry.

The DID will also ensure that it is represented at all bid committees of its implementing agent and arrange the transversal term contracts for consignment stocks. The Department will continue to uphold the acceptable principles of procurement by ensuring that all contracts are awarded within the validity period and in a manner that is fair, equitable, transparent, competitive, and cost-effective.

The Local Government Municipal Finance Management Act (LGMFMA) of 2003 mandates the creation of supply chain management policies for all South African municipalities. The LGMFMA of 2003 permits municipalities to use alternative forms of competitive bidding, such as auctions, quotes, and tenders (National Treasury Regulations 2005).

### **3.6 Preferential Procurement Policy Framework Act, 2000**

Preferential Procurement Policy Framework Act (PPPFA) (No. 5 of 2000) Parliament approved the PPPFA in February 2000 to abide by the constitution's requirements. The Act represents a development in the reformation of procurement. It includes a structure for using preferences in the public sector procurement process. The framework is applicable to all state organs operating at the local, provincial, and national levels of government that use the public sector procurement system. Any state agency tasked with carrying out the preference policy may only do so within the bounds of the Act. Every procurement process must use the preferences points system. The PPPFA and related rules allocate preference points to different policy objectives in order to support historical disadvantage persons (HDIs) and a wide range of development objectives (National Treasury 2003).

Since the PPPFA was introduced, which aimed to give previously disadvantaged groups opportunities in government supply chain contracts, preferential procurement and supply chain performance have gained popularity among academics over the past

20 years. Even though PPPFA is a corrective tool, research has shown that government officials tasked with carrying out this job have abused and manipulated the Act (Sibanda & Tshikovhi 2022:11).

The South African government used PPPFA in order to provide opportunities for historically underprivileged communities that were excluded from government contracts (Selomo & Govender 2016). The measure sought to bridge the gap left by the previous administration, which restricted equal chances in public procurement (Hlakudi 2015). Until 1994, government supply chain contracts were awarded to established contractors, who were a minority of the population, in accordance with the apartheid regime. This resulted in discrimination against the greater population, who were unable to achieve these requirements (Ambe & Badenhorst-Weiss 2012).

To guarantee continual improvement, the GDID is dedicated to bringing all SCM policies, charters, compliance checklists, Delegations of Authority, and Standard Operating Procedures (SOPs) into line with the most recent SCM reforms. To guarantee moral behaviour and compliance with SCM guidelines, the department will also provide SCM training to all SCM officials. In order to guarantee proper responsibility segregation, the department is also in the process of filling all essential open SCM positions. The department has set up SCM forums so that all healthcare facilities are promptly informed of any revisions to SCM reforms and SCM guidelines. The department will make sure that procurement tactics are in line with reaching the provincial goals established by the PPPF Act and the Gauteng Township Economy Revitalisation (TER) Strategy (Provincial Government 2023:126).

Apart from the aforementioned, the Provincial Government (2023) additionally declares that GDID will reinforce and execute enhanced control measures and, when necessary, employ consequence management to minimise the irregular expenditure that may arise from the improper implementation of the supply chain management process. This will be achieved by guaranteeing that no cases are divided, and no contract extensions are granted due to inadequate planning. The Department will recruit adequately competent and experienced officials to several Compliance Committees, including the Quotation Adjudication Committee, in order to address and decrease irregular expenditure.

The PPPFA was subsequently developed to enable formerly underprivileged black-owned South African enterprises in the procurement process equal opportunity in government contracts, hence reducing the disparity in power. Affirmative action, a system in which companies make concerted attempts to provide opportunities for employment and advancement to historically marginalised groups in the workplace, is a manifestation of the principle, which finds its origins in the Constitution of the Republic of South Africa Anon 2012 (Van Rensburg *et al.* 2015).

The Republic of South Africa's 1996 Constitution states that as a result, procurement reforms were implemented, encouraging state institutions to support the growth of formerly underprivileged people in the awarding of government contracts. The National Treasury, which is in charge of issuing all instructions pertaining to the SCM function and making sure that procurement is in compliance with the PPPFA and other regulations applicable to SCM, discovered inconsistencies as a result of the procurement function's independence across all provinces. As a result, the SCM framework was introduced with the aim of establishing standardisation among procurement departments. Then, these rules establish a prescribed procedure for how government agencies should carry out procurement.

### ***3.6.1 Challenges associated with the preferential procurement policy framework act***

Organs of the state nevertheless encounter difficulties implementing the PPPFA, even though it offers guidance on the procedure. According to research, supply chain officials encountered challenges implementing the PPPFA (Selomo & Govender 2016). In addition, it was observed that unfair procurement practices occurred during the implementation process, with preferential points either not being applied or being applied incorrectly, as well as improper preferential point systems and thresholds (Fourie & Mazibuko 2019).

Corruption is still a serious risk in public procurement, despite laws governing the moral behaviour of the process (Fourie 2015). Negligence on the part of public employees that has a negative impact on the supply chain process is another element impeding the PPPFA's proper implementation (Munzhedzi 2016). According to Hlakudi (2015) the majority of businesses that interact with the government do so dishonestly by obtaining favourable points that they do not merit. It has also been stated that the

majority of government employees in government departments were not aware of the preferred procurement targets. There is still a vacuum in the monitoring and assessment of the policies, even though the procurement processes have become better over time (Shai *et al.* 2019).

### **3.7 Broad-Based Black Economic Empowerment Act, 2003**

Broad-based black economic empowerment act (BBBEE) (Act 53 of 2003). The Act was, among other things, signed on January 9, 2004. In addition to establishing standards of conduct that may include requirements for qualifying for preferential procurement and other economic activities, it offered a comprehensive charter to support BEE (National Treasury, 2003). Anti-corruption policies and procedures: The constitution guarantees the right to fair administration, information access, and high ethical standards for public administration. The government's power to fight corruption has been bolstered by recent legislation pertaining to transparency and anticorruption, which also protects workers who disclose information about their employers in the public and private sectors (National Treasury 2005a).

Aiming to ensure that the previously disenfranchised groups (defined in South African Competition Act No. 89 of 1998 as Indian, Black, and Mixed Colour people) equally benefit from public procurement activities, the BBBEEA (2003) amplifies the inferences made in the SA Constitution, PFMA of 1999, and LGMFMA of 2003. Therefore, the PPPFA was a statute that had to be created in order to correct historical injustices in public procurement. This Act uses a point system to do this. The procedure for awarding bids was therefore delineated by the Procurement Policy Schedule (80/20) and the 90/10 preferential rule, which were referenced in the PPPFA and the Preferential Procurement Regulations. According to these laws, the purchase of goods or services must be based on the Rand value of "equal to or above R30 million to R50 million" when a tender is awarded using the 80/20 ratio. Therefore, the 90/10-point allocation would be used if the offer is more than the R50 million threshold amount (RSA Preferential Procurement Regulations 2017).

The GDID aimed to accelerate the implementation of the infrastructure programme so that all public health facilities could provide effective health services to the population. During 2021/22, the Charlotte Maxeke Johannesburg Academic Hospital's Radiation Oncology Unit and the mental health wards at both Charlotte Maxeke Johannesburg

Academic Hospital and Chris Hani Baragwanath Academic Hospital were completed. The construction of new hospitals has been put on hold, and the projects have been assigned to the Gauteng Infrastructure Financing Agency (GIFA) for PPP funding (Provincial Government 2023:121).

Every government body is required by law to establish an SCM unit and put SCM into practice. The Treasury guidelines said that towns and departments have until 2005 or 2006 to implement SCM. Operating within the policy framework of the South African SCM processes, adhering to the principles outlined in the laws and regulations governing SCM in municipalities, and understanding and implementing the implications of the legislative requirements for organisations engaged in municipal service delivery are all examples of complying with SCM. According to the study, every department and municipality has created a unique SCM policy as needed. But implementation is still difficult.

The SCM policy states that management teams, accounting officers in government agencies, and other staff members must be aware of and comprehend the values or concepts ingrained in the legal framework that influence SCM (National Treasury 2005a). Every step of the process, from the demand for goods or services to their acquisition, management of the logistics process, and, at the end, their disposal, is where supply chain management seeks to add value. By doing this, it resolves issues with contract management, obsolescence planning, inventory and asset control, and procurement (Matthee 2006). Standardisation of bid and contract documents, alternatives, and bid and procedure standards are some of the ways that uniformity in these areas encourages supply chain management techniques (National Treasury 2003; Migiro & Ambe 2008).

In the financial year 2021-2022, the GDID continued in its overachievement towards black owned and vulnerable groups such as women, people with disabilities, youth, and military veterans. In order to fast track its process to meet the targets of the 6th administration, it will be finalising its Preferred procurement policy in order to advance B-BBEE objectives. This plan will assist in increasing procurement from township-based businesses in a number of projects including the provision of maintenance on government buildings across the province. The development of the Emerging

Contractor Database will also be a critical success factor contained in the plan (Department of Infrastructure Development 2022:13).

The engagements with communities that SCM is undertaking within GDID are to educate the communities on compliance as it relates to the tender and quotation processes. This is an attempt to increase the number of underperforming groups, such as township-based, military veterans and people with disabilities, to participate in the tender process or submit quotes (Department of Infrastructure Development 2022:13).

According to the Department of Health (2022:49) hospital management focused on the following three key priorities in the financial year 2021/22: Review of the Regulations relating to designation/classification of hospitals, Policy Guidelines on increasing capacity to strengthen local decision making and accountability to facilitate semi-autonomy of central hospitals, and Policy Guidelines on improving accountability and effectiveness of provincial tertiary, regional, and specialised hospitals through increased decision space in four critical management domains. A process was undertaken to review the regulations relating to designation/classification of hospitals, profiled information relating to catchment areas and clinical services rendered at each hospital level (secondary to quaternary), their corresponding size and layout, staff complement, equipment, supplies, and drugs, reimbursement model, clinical areas to be covered, levels of autonomy, management cadre and capabilities, and key performance areas.

### **3.8 Chapter summary**

This chapter examined the legislative and policy frameworks that govern SCM in SA health departments. The discussions in this chapter show that legislatures play a significant role in government service delivery in South Africa, even though there are many gaps in the application and observance, including noncompliance with these legislatures by government departments. The goal of the SCM laws is to ensure that municipalities spend their resources wisely in order to achieve the important outputs and desired results. The next chapter will discuss the research methodology.

## CHAPTER FOUR

### RESEARCH METHODOLOGY

#### 4.1 Introduction

The preceding chapter provided a detailed account and discussion of the legislative and policy framework that influences SCM in health infrastructure. This chapter outlines the research methodology of the research. The qualitative research approach was applied to address the principal objective of this study, which is to explore and understand the perceptions and experiences related to health infrastructure supply chain management within the GDID. In this chapter, the research approach, research design, selecting the case study location, sampling and data collection process, qualitative data analysis are discussed in detail.

#### 4.2 Research Approach

Bryman (2016:379) describes qualitative research and points out that when using this method, the focus is frequently on words rather than numbers while acquiring and analysing data. According to Taherdoost (2022:54) qualitative research aims to collect primary, first-hand, textual data and analyse it using specific interpretive methods. It is a useful method in studying a phenomenon with limited accessible information as its nature is exploratory. Qualitative research is thus apt for a study of this nature.

The study used the qualitative research approach, which provided a more comprehensive understanding of the implementation of health infrastructure SCM processes within the Gauteng Department of Infrastructure Development. Through this method, the researcher was able to understand the topic under study through the experiences of identified officials within the GDID. These officials are directly involved in the daily activities of health infrastructure SCM.

When considering the target population as an example, this approach's stated drawback is that, in contrast to the quantitative approach, its conclusions cannot be extrapolated to the entire population (Hossan *et al.* 2023:211). However, it should be understood that the aim of qualitative research is not to produce statistically significant findings that are representative of a wider population, but to gain deep insights into people's experiences, behaviors, emotions, social contexts, and the meanings they

attach to specific situations, hence, it was suitable for this research. Additionally, since a lot of data must be gathered and processed, one of the well-known disadvantages of the qualitative approach to research generally is that it typically involves a very time-consuming procedure. Important study-related difficulties could also be overlooked, as the researchers' interpretations are frequently constrained to what they believe is pertinent to the study (Choy 2014:102). The present investigation upheld the coherence between the research objectives and the designated qualitative methodology. Therefore, because careful planning came before the investigation, the aforementioned drawbacks had no effect on it.

Furthermore, because the process of inquiry in qualitative research is open-ended in nature, participants in the study were able to freely express their opinions about various matters of importance to them, which contributed to the richness of the data gathered.

#### **4.3 Research Design**

The study was conducted using a case study design. A case study is a method of conducting research that involves empirically analysing a particular contemporary issue (Moser & Korstjens 2018:09). In this instance, the Gauteng Department of Infrastructure Development is the case study. According to Janvier-James (2012:200) case study research examines a contemporary event in-depth and in its natural setting. According to Briggs and Flemming (2007:320) case study research is often qualitative and pays attention to a wide range of factors in a limited number of examples, including "individuals, groups, organisations, movements, events, or geographic units."

With the use of the case study methodology, the researcher gathered detailed information about the subject matter from the experiences and the views of a variety of participants within the Gauteng Department of Infrastructure Development. This case study strategy provided a comprehensive understanding of the processes and challenges underpinning public health infrastructure SCM.

#### **4.4 Data collection methods/instruments**

McLaughlin (2016:102) defines the data collection process as a "scientific way of gathering and measuring information from a number of sources and it is done in order

for the research to obtain complete and accurate answers to the research questions". The researcher used a combination of instruments to gather as much information as possible. The study employed primary and secondary data collection methods. For primary data collection, the researcher used semi-structured interviews. The researcher allowed for interviews to be conducted on an online platform named Microsoft Teams. This was done to enable participants to be comfortable in their own space. For secondary data collection, the researcher used peer-reviewed articles, policy documents, rules, official documentation, case laws, and legislation. The two data collection methods would be explained in subsequent sections.

#### **4.4.1 Semi-structured interviews**

Semi-structured interviews are defined as a common technique that allows participants to reply to open-ended questions while the moderators make sure they do so in accordance with the guided questions (Creswell & Poth 2016:122). Semi-structured interviews were utilised as a means of data collection in this study. The study administered the semi-structured interviews to the employees of GDID that are directly involved in SCM processes, particularly in health infrastructure. The purpose of conducting the interviews in this study was so that in-depth knowledge of the procedures and processes of health infrastructure SCM could be obtained. The study research participants were categorised into one group, which is the procurement SCM directorate. This group was selected through purposive sampling. Numerically, 5 out of the 7 officials were interviewed.

To ensure that every respondent heard the same questions in the same order and with the same methodology, the semi-structured interviews were formalised. Semi-structured interviews provide the benefit of allowing responses from a variety of participants (Clifford & Clark 2019:45). This tool was also employed since it was suitable for situations requiring clear-cut, thorough factual data. According to Bless and Higson (2008) this instrument, or approach has the advantage that questions may be readily clarified if they are misinterpreted, and it allows for the observation of non-verbal behaviour and mannerisms. On the other hand, it has the drawback that participants may give responses that are socially acceptable. The results of these interviews are presented in Chapter Five.

#### **4.4.2. Documentary evidence**

The process of gathering secondary data includes looking through pre-existing sources, such as reports, books, and journal articles. Documentary evidence, according to Cresswell (2014) is most useful in qualitative case studies that focus on providing a detailed description of a specific incident.

According to Brynard *et al.* (2014:40) a thorough and well-considered evaluation of relevant literature must be conducted beforehand in order for a research effort to be successful. They also state that the researcher should review any official government documents as well as disciplinary records in the field of Public Management, which is the sub-field of Public Administration that this study falls under (to be covered in more detail in the following chapter). This will improve the subject matter's data richness and enable the researcher to present an accurate picture of the problem being studied. The researcher employed a combination of published and unpublished secondary sources, encompassing books, journal articles, dissertations, and materials from the UP library and other academic establishments. Additionally, government papers such as audited annual reports, policies, legislation, and strategic plans were consulted.

A noted benefit of surveying the abovementioned documents in the study was that the process provided the researcher with simple access to some of the study's required data, as most of the data was obtainable online. However, the disadvantage of document analysis is that it can be a time-consuming process and may, in some cases, not provide a full reflection of the problem under study, as the data from a literature review is considered secondary data (Brynard *et al.* 2014:41). Thus, as previously mentioned, the commencement of the study was preceded by careful planning. The accuracy of the data used in the document analysis was verified against the semi-structured interviews that were conducted. Furthermore, the knowledge obtained from the literature also provided valuable insight into the tools that could be used as the basis for the analysis of the public health infrastructure SCM processes and led to the discovery of the Infrastructure Delivery Management System (IDMS) model on enhancing the importance of planning, procurement, delivery, and maintenance of public infrastructure by GDID. This model was used in Chapter Four's analysis of the research results, as previously indicated.

#### 4.5 Target population and Sampling

Population is the entire group of individuals that is of interest to the researcher, while target population refers to the whole individuals whereby the researcher seeks to draw conclusions (Brink *et al.* 2012:131). This study's research population consisted of 5 officials of GDID employed under procurement (SCM). Furthermore, Leedy and Ormrod (2013:152) state that qualitative research generally employs non-probability sampling techniques, as individuals selected to participate in the study are purposefully chosen based upon a view that they will provide the most valuable information regarding the topic under study.

As a result, the purposive sampling technique was employed in this study. Purposive sampling is also known as judgement sampling. Here, the researcher uses their judgement to decide who should be in or out of the sample. It is used when the researcher is looking for individuals who have certain characteristics or expertise, but there is a higher chance of subjectivity and bias (Moser & Korstjens 2018:11). The primary objective of purposive sampling is to select instances, individuals, or communities that are most relevant to addressing the research question effectively. Consequently, the ideal situation for employing purposive sampling is when you possess a strong understanding of your research topic. The more knowledge you have, the better your sample's quality will be (Moser & Korstjens 2018:13).

In the case of respondents from GDID, as explained in Chapter Four, according to a communication by Ms M Moshoeshe (2024), the GDID has a total of 30 staff members who are directly involved in SCM processes, of which 7 of them are directly working with health Infrastructure SCM. The remaining 23 are divided between Education and Stars infrastructure SCM, which consists of Sports, Arts, Culture, and Recreation (such as libraries and recreation facilities), Agriculture (such as reticulation infrastructure), Transport (such as driving license testing centres) as well as Social Development. The sample from the GDID in this study therefore only focused upon employees working under the Health Infrastructure Supply Chain Management, as that is where activities related to the study's research objectives are carried out. The designations of the 7 employees are as follows Chief Director, Director, Assistant Director, Senior Administration Officer as well as Administration Clerks. The researcher intended on conducting interviews with all 7 officials. It was just unfortunate

that two of the officials were not interested in partaking in the study. Even with the intervention from their senior (Chief Director), the director and his assistant were adamant on not taking part and their reason was that they are too busy and will definitely have no time to be interviewed for school things. What made the whole situation harder was that the whole department was working from home, and no one was reporting to the office since the buildings were being renovated. Communication was done by telephone. Nonetheless, interviews were successfully conducted with the Chief Director, Senior Admin Officer, as well as the 3 Admin Clerks.

#### **4.6 Data analysis strategy**

According to Vancauwenbergh and Poelmans (2019) data analysis is a process in which a researcher identifies and focusses on themes in texts. The researchers tell the tale as they perceive it, highlighting the connections between the themes and how the speaker's traits explain the occurrence of particular topics.

Since this research is qualitative in nature, the researcher employed thematic analysis. For instance, in this study, the strategy helped the researcher to qualitatively analyse data concerning the health infrastructure SCM processes in GDID. According to Hammond and Wellington (2013) "thematic analysis is a step-by-step approach by which data can be sorted, organised, and conclusions reached, identifying differences and similarities to make conclusions".

Once data had been collected, the raw data was categorised, and interviews were transcribed, synthesised, and coded using thematic analysis to identify themes manually. Data was then reported based on identified themes. The themes were categorised according to the different research objectives in the semi-interview schedule, which included challenges faced by the health SCM department at the GDID, the perceptions and experiences related to health infrastructure SCM within the GDID, the role of various stakeholders in the health infrastructure SCM process at GDID, and improvements upon efficiency and cost effectiveness of health infrastructure SCM practices at GDID.

#### **4.7 Validity and Reliability**

According to Leung (2015) the suitability of the study equipment, methodology, and data constitute validity in qualitative research. According to Sahu (2013) validity in

qualitative research evaluates whether the methodology selected is appropriate for addressing the research question, whether the sampling and data analysis are appropriate for addressing the research question, and whether the research question is valid for the intended outcomes

In the context of the study, the researcher reviewed the research questions together with their supervisor to ensure that content validity was achieved. In addition, the researcher ensured validity by using multiple sources of evidence, including semi-structured interviews, to understand the processes of health infrastructure SCM.

In the context of the study, in order to ensure the reliability of the research findings, although primary data as a source was collected through semi-structured interviews, the researcher also conducted documentary analysis of Departmental Annual Reports, policies, legislation and strategic plans to supplement the sourced interview data. The literature review in chapter two and documentary evidence presented in chapter five also assisted in interrogating and validating the research findings.

#### **4.8 Chapter summary**

This chapter provided an outline of the case study research strategy targeting the GDID and the qualitative methodology that was used to research the study problem statement. The chapter described the research setting, provided a detailed explanation of the methods that were applied to select the participants, explained the techniques used for data collection and described the methods of data analysis conducted to investigate the research questions. The next chapter will present GDID's case study and discuss its findings.

## CHAPTER FIVE

### FINDINGS AND DISCUSSIONS

#### 5.1 Introduction

The previous chapter provided the methodology utilised in the research. This chapter presents the findings of the case study of health infrastructure supply chain management at the Gauteng Department of Infrastructure Development. This chapter provides an overview of the case study of GDID. In this chapter, an analysis is provided on the extent to which SCM has contributed to efficient and cost-effective public health infrastructure services. Furthermore, the study analysed the challenges encountered by the SCM unit at the GDID and made recommendations on how to overcome the identified challenges at GDID.

The findings of the data analysis are presented in light of the research objectives of the study that aimed to do as follows:

- To explore and understand the perceptions and experiences related to health infrastructure supply chain management within the GDID
- To investigate the role of various stakeholders in the health infrastructure SCM process at GDID.
- To explore the challenges faced by the SCM Department within the Gauteng Department of Infrastructure Development
- To offer recommendations as to how the GDID may implement health infrastructure SCM processes to avoid and/or address challenges.

The documentary sources also provided study findings in addition to semi-structured interviews.

## **5.2 An overview of the Gauteng Department of Infrastructure Development**

The Gauteng Department of Infrastructure Development implements the Gauteng Provisional Government's (GPG) capital expenditure budget allocation and other infrastructure projects that utilises sole or joint GPG financial investments, to maximise the social and economic benefits of GPG's property portfolio, and it is the implementing agent for all GPG department infrastructure developments.

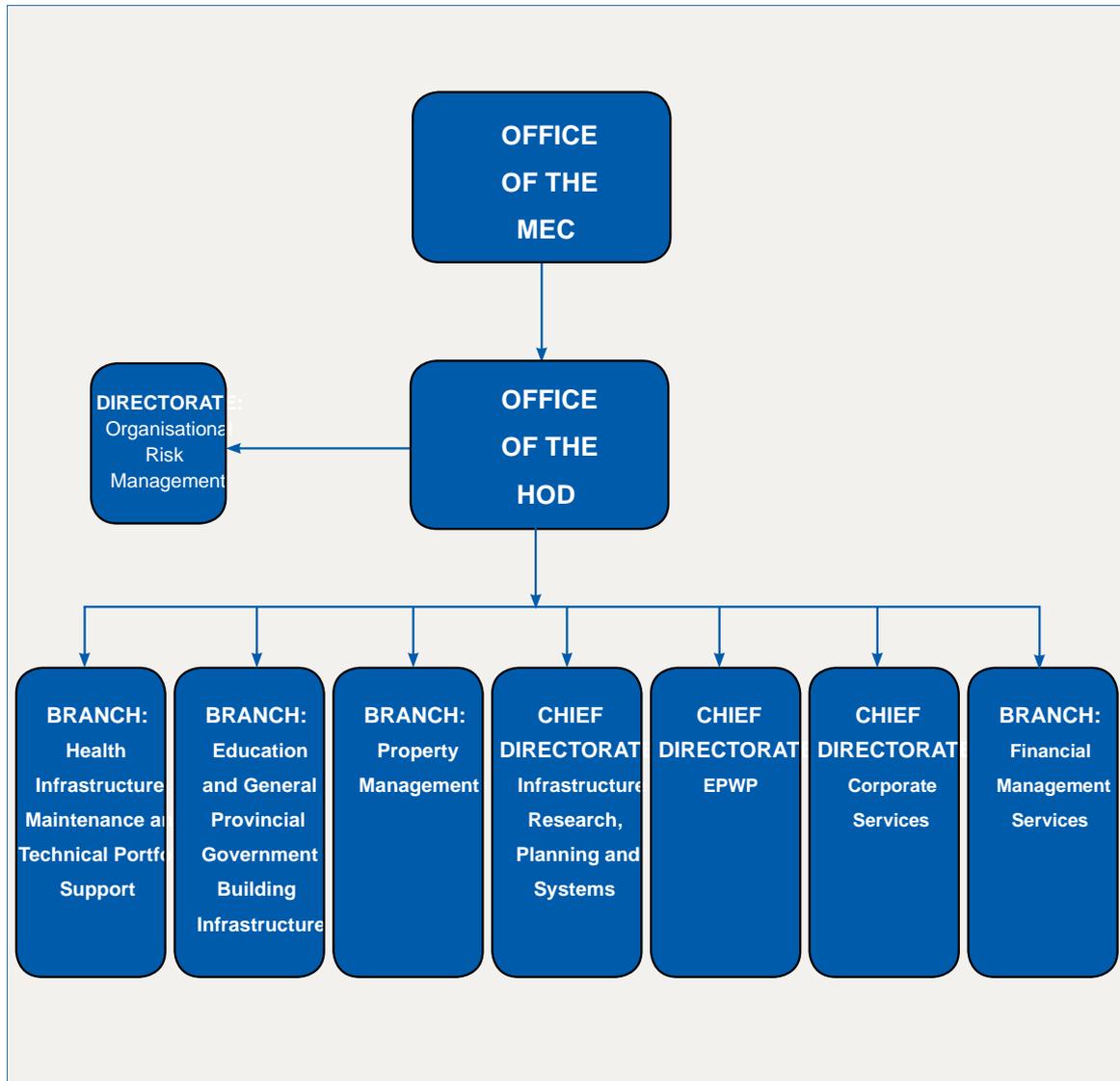
The GDID has as one of its main goals "making a better life for all" by way of the provision and upkeep of infrastructure for public institutions such as public schools, public hospitals, public clinics, and frail-care facilities. Other priorities include the creation of decent work, the development of an expanding, all-inclusive economy, and the promotion of standard education and skill development (Department of Infrastructure Development 2018:12).

### ***5.2.1 The organisational structure of GDID***

The Department of Infrastructure Development consists of five high-level units known as branches (i.e., Education, Health, Financial Services, Property Management, and Corporate Services) plus three strategic units at the level of a chief directorate (i.e., EPWP and Infrastructure Research, Planning and Systems) and directorate (i.e., Organisational Risk Management). The five units report to the Head of Department, who is the administrative head of the organisation. The staff complement of the department is mostly made up of technically orientated professionals such as architects, construction project managers, engineers, technicians, boiler operators, and artisans, among others. The balance staff complement consists of units who provide cross-cutting administrative and technical support to the core branches (Department of Infrastructure Development Corporate book 2022:07).

The GDID structure is represented in diagram 1 below.

*Diagram 1: Organisational structure of GDID*



*Source: Department of Infrastructure Development Corporate Book 2022: 07*

***GDID staffing***

During the time of conducting this study, the Department of Infrastructure Development had a staff complement of approximately two thousand five hundred (2 500) employees, as depicted in table 1 below.

Table 1: GDID staffing by budget programme

| Programme      | Number of posts on approved establishment | Number of posts filled | Vacancy Rate | Number of employees additional to the establishment |
|----------------|---|------------------------|--------------|---|
| Administration | 404                                       | 327                    | 19           | 15  |
| Public works   | 2440                                      | 2049                   | 16           | 27  |
| EPWP           | 46  | 44                     | 4.35         | 5   |
| Total          | 2890                                      | 2420                   | 470 (16%)    | 47  |

Source: DID Annual Report 2022/ 2023:130

For the purpose of the study, the health infrastructure branch is explained below.

The Health Branch is responsible for the design, planning, construction, maintenance, and upgrade of community health centres, hospitals, laundries, boilers, and government mortuaries, as well as the installation and maintenance of electromechanical equipment and backup power supply units at public health institutions in Gauteng. The Branch is implementing a prototype model for community health centres in partnership with the Department of Health in the province. The unit is involved in the construction of NHI clinics that are in line with health infrastructure norms and standards. The branch is responsible for both preventative and planned maintenance of 34 hospitals and more than 111 clinics and health care centres in the province. The branch is headed by the Deputy Director General: Health Infrastructure (Department of Infrastructure Development 2022:09).

Furthermore, GDID is made up of three programmes that are mandated to provide executive support services and promote ethical and good governance within the department.

Programme 1: Administration:

The purpose of the administration programme is to provide strategic leadership and to support the core programmes in their efforts to implement the mandate of the

department. This includes the provision of strategic and operational support services for the MEC and the HOD, the provision of finance and supply chain management services, corporate support services, and organisational risk management services.

#### Programme 2: Public Works:

The purpose of the Public Works Programme is to provide the core services that are mandated to the Department. This includes planning, design, and construction of infrastructure projects; the implementation of maintenance projects, property management (immovable asset management) and facility management; and the provision of infrastructure research, policy, and systems.

Within the GPG, the DID has been delegated by EXCO as the sole implementer of infrastructure and maintenance projects on behalf of all GPG departments. Maintenance projects include renovations, refurbishments, and upgrades. The Gauteng Department of Health is responsible for implementing routine, preventative, and emergency maintenance at all health facilities in the province, with the exception of Jubilee Hospital and Odi Hospital, which fall under the purview of the provincial Department of Health.

The GDID manages the construction procurement projects for provincial departments and issues framework/term contracts for day-to-day routine/preventative maintenance when required, for all provincial departments. This also includes the maintenance and estate management services provided for shared offices, the Premier's residence, and offices used by the DID itself. The department also uses immovable assets for its own functioning. The Programme is also responsible for managing the immovable assets of the GPG as the provincial custodian. It manages and plans for effective and efficient utilisation of immovable assets, management of leases, estates, and payment of creditors for allocated areas, management of acquisition and disposal of immovable properties, and facilitation of property development.

A picture of a health facility (Community Healthcare Centre) build by the department is presented in diagram 2 below.



*Source: Department of Infrastructure Development 2022:19*

*Diagram 2: Community healthcare centre*

### Programme 3: Expanded Public Works Programme (EPWP):

The purpose of the Expanded Public Works Programme (EPWP) is to coordinate the implementation of programmes and strategies that lead to the development and empowerment of communities and develop strategies to promote enterprise development. This encompasses the provincial coordination of the EPWP. The EPWP is a nation-wide programme aimed at the reorientation of the public sector spending in favour of projects that create more work opportunities. Provincial departments and municipalities are, therefore, required to assume responsibility of planning, design, and implementation of job creation initiatives within their departments and municipalities. Reporting of job creation on the EPWP reporting system and all budgetary and project management principles therefore remains the responsibility of each reporting body.

A picture of EPWP participants at work site is presented in diagram 3 below.



Source: Department of Infrastructure Development 2022:1  
*Diagram 3: EPWP participants at work site*

### **5.2.2 Infrastructure Delivery Management System**

The Infrastructure Research Planning and Systems (IRPS) unit is a strategic function responsible for the management of infrastructure research, longer-term infrastructure planning, and projects, programme and portfolio management of systems and standards for the department. The IRPS unit collaborates with internal business units and professionals in the department, while also it also partnering with external research bodies and institutes of higher learning to provide innovations such as the use of drone technology to monitor infrastructure development projects implemented by DID. The Unit also manages the enterprise-wide systems, such as National Treasury's Infrastructure Delivery Management Systems (IDMS) adopted by the province as the main tool for the planning, budgeting, procurement, maintenance, operation, monitoring, and evaluation of infrastructure delivery. The IRPS unit also manages green technology initiatives through which the department implements environmentally friendly technologies such as energy-saving light, and the construction of heat-retention walls at new schools (Department of Infrastructure Development 2023:10).

### **5.3 Discussions on findings of the research are presented below:**

The objectives of the study are: 1) to explore and understand the perceptions and experiences related to health infrastructure supply chain management within the GDID; 2) to investigate the role of various stakeholders in the health infrastructure SCM process at the GDID; 3) to explore the challenges faced by the health infrastructure SCM Department within the Gauteng Department of Infrastructure Development.

In alignment with the thematic analysis approach adopted in this study, the following sections of the chapter present the research findings derived from the data collected using the instrument attached as Annexure D and literature. These findings are organised according to the study's objectives and themes that emerged from the questions posed to the respondents.

#### **5.3.1 Objective 1: Perceptions and experiences related to health infrastructure supply chain management within the GDID**

With this question, the researcher wanted to gain extensive information regarding the perceptions and experiences of GDID health infrastructure SCM employees. Themes emerged from both the literature discussed and interviews. These include skills enhancement, transparency and accountability.

##### *Skills enhancement*

During the 2022/23 financial year, the department has implemented several projects on behalf of client departments, including the Department of Health, Education, and Social Development, Sports, Arts, Culture, and Recreation and Roads and Transport. In projects' implementation, the department has faced several issues pertaining to changes in scope of the projects, cashflow problems of the contractors, and community unrests causing delays in completion of these projects. Some of these challenges, at times, have resulted in contractors abandoning the sites. The bleak global economic outlook has resulted in limited budget allocation for projects, which has affected their implementation (Department of Infrastructure Development 2023:34).

Participants have noted that lack of human capacity was quite prominent amongst all participants. There is an acute shortage of skills in SCM. The shortage of skills and the inability to delegate duties are leading to a delay in service delivery. Nyide (2022:11) has supported this claim by recognising lack of individual knowledge, skills, and ability as some of the attributes within SCM in the public sector.

One participant said, “... *training ensures that SCM professionals keep up with the latest tools...*” (Participant 4).

“... shame the department tries to equip us by sending us to trainings once in while...” (participant 2).

“... ahhh not really, I think I attended trainings twice since I joined DID....” (Participant 1).

The above statements imply that continuous training withing the GDID health SCM unit should be offered, as it will ensure the practitioners enhance their ability to manage complex supply chains effectively.

Participant 3 ascertained that the Department of Infrastructure Development continuously provides support to emerging contractors through the Contractor Development Programme (CDP). The CDP is aimed at transferring skills for emerging contractors in the infrastructure sector to ensure they possess adequate technical skills and experience needed to implement projects.

These findings reinforce the interpretation of the New Public Management approach, which recommends that public officials need to acquire skills to enable them to resolve complex problems in partnership with citizens by being open, accessible, accountable, and responsive when serving citizens (Robison 2015:10). Furthermore, the NPM approach emphasised the “importance of public service ethos, values, and motivations of public servants dedicated to the wider public good” and the

importance of motivation of the public in this regard, which corroborates with the findings above.

Findings from literature state that despite its almost thirty-year history, some practitioners still view SCM as a straightforward technology that can be embraced and deployed without strong foundations. This could be one of the causes of SCM's failure in the healthcare industry. SCM in healthcare has received a lot of attention lately because of its substantial influence on hospital performance in lowering waste, enhancing service and treatment quality, and increasing operational efficiency.

### *Transparency and Accountability*

According to Davoudpour and Rezapour (2016:131) “transparency is an important indicator of satisfaction between government and citizens.” A transparent government increases citizen trust and satisfaction towards the work of government. Satisfaction serves an important role in mediating the relationship between municipalities and citizens.

Participant 3 alluded

*“My experiences in health infrastructure SCM have shaped both positive and negative perceptions.”*

This participant further stated that:

*“...effective SCM during emergencies, like the COVID-19 pandemic, highlighted the importance of preparedness and strong supplier relationship...” (participant 3)*

*“... it's not easy to account for the bad that you did. Hence the issue of accountability remains a big challenge in this unit, it leads to conflicts. (participant 1)*

The above statements show that being prepared also comes with being transparent and ensuring that one takes full responsibility for their actions. Open communication and clear tracking of supply chain processes are signs of transparency and accountability. Participants state that miscommunications between departments have

led to delays and errors, underscoring the need for better coordination within the GDID.

Financial accountability is the first and central component of an economic transition in which the provision of services and allocation of resources by any government is held accountable to the public. The lack of transparency discourages investor confidence as procurement and financial malpractices deter economic growth. Exercising accountability is fundamental since the citizens have endowed their trust, faith, and resources, and that means doing things transparently following appropriate processes and feedback.

### **5.3.2 Objective 2: The role of various stakeholders in the health infrastructure SCM process at GDID.**

With this objective, the researcher wanted to find out who the stakeholders are and what role they play in ensuring the success of SCM implementation within the GDID.

The study's findings reveal that various stakeholders play critical roles to ensure efficient planning, procurement, and delivery of health infrastructure projects, such as hospitals, clinics, and health centres. Below are the primary stakeholders that play a role in SCM processes within the Gauteng Department of Infrastructure Development.

- National Department of Health (NdoH)

The NdoH sets health standards, policy frameworks, and strategic guidance for health infrastructure. It ensures that infrastructure meets healthcare needs and aligns with national health goals.

- Provincial Government (Gauteng)

This stakeholder provides funding, oversight, and governance in line with the province's health priorities. It monitors the performance of infrastructure projects.

- Treasury Departments

Involved in budget allocations and financial management. Ensures that funds are available and allocated efficiently for health infrastructure projects.

However, the researcher notes that a disconnect between GDID and the above stakeholders may result in inadequate infrastructure, poor project prioritisation, or unaddressed issues like inadequate sanitation, malfunctioning equipment, or incomplete facilities.

### **5.3.3 Objective 3: Challenges faced by the health infrastructure SCM department within the Gauteng Department of Infrastructure Development**

The researcher's aim was to explore and understand the challenges that occur during the implementation of SCM procedures at the GDID. The following challenges were identified by participants and literature. The challenges include supplier relationships dependencies, maintenance and support, fraud and corruption, risk management, as well as the high cost of infrastructure

#### *a) Supplier Relationships Dependencies*

The study's findings indicate that lack of inter-coordination among the departments cause work disruption, repetition of work etc and leads to operational failures in the health supply chain which is the collaborative functions of all departments in an organisation to deliver services. It is observed that organisational culture and human resources policy also contribute to the failure in the health infrastructure supply chain (Albarune 2015:42).

The study also finds that organisations employ various types of partnerships, some recognised through contracts, while others are based on informal understandings. In practice, most relationships incorporate both formal and informal elements (Okoumba *et al.* 2020).

Participant 3 stated that:

*“Strong relationships can lead to better pricing, more reliable delivery schedules, and access to high-quality products. ummmh in healthcare, having trusted suppliers is crucial, especially during emergencies.”*

One participant alluded to that:

*“Working in health infrastructure supply chain management comes with its own set of unique challenges, especially given the critical nature of healthcare services. Sooo building relationships with suppliers is important”* (Participant 3)

The study's findings also reveal that the Department of Infrastructure Development has engaged with sector organisations in the construction and build environment with the view to identify challenges and find solutions that will help transform the status quo. The engagements include sessions held with organisations representing women, youth, people with disabilities, military veterans, the LGBTQIAP+ sector, professional bodies and associations, the Construction Industry Development Board, and the Construction and Build Environment, amongst others. The Contractor Development Programme is a demonstration of government commitment to the development and empowerment of emerging contractors in the sector.

These findings therefore are in congruence with the literature and highlight that in practice, most relationships incorporate both formal and informal elements; regardless of their formal or informal nature, it's crucial to evaluate the outcomes of these relationships regularly. Adjustments to the arrangements should be made as circumstances or the expectations of parties evolve. In essence, active management of the relationship is necessary, although depending on the supplier's relationship can be challenging.

*b) Maintenance and Support*

The findings of the study reveal that hospital infrastructure necessitates continuous maintenance, upgrades, and replacements to uphold optimal performance and adhere to regulatory requirements. The study reveals that maintenance and support are another challenge within the GDID. According to participants, DID's top priority is ensuring a functional, reliable, and compliant infrastructure through effective and timely maintenance of facilities. One participant also stated that DID aims to increase the ratio of preventative to reactive maintenance to 80:20 over the MTEF period.

One participant stated that:

*“Collaboration of GDID with GPHEALTH and Provincial Treasury ummmh ensures that ongoing maintenance occurs at our health facilities.” (Participant 4)*

*c) Fraud and corruption*

Participants indicated that they still encounter fraud and corruption within the department. However, the GDID has an approved Fraud Prevention Plan containing the Fraud Risk Register. The implementation of Fraud Risk Action Plans is monitored and reported to oversight structures, e.g., the Audit Committee.

According to the Department of Infrastructure Development (2023:75) mechanisms are in place to report fraud and corruption and how these operate. The need for officials to make confidential disclosures about perceived and/or actual incidents of fraud and corruption is encouraged through mechanisms such as the National Anti-Corruption Hotline (NACH), the Premier's Hotline, etc. Reported cases of perceived and/or actual incidents of fraud and corruption are investigated, and, where required, consequence management is instituted against the transgressors.

Participant added that:

“.....the department is really having a challenge of corruption. We see it on a daily basis and sometimes there really is nothing we can do...” (participant 1).

The above statement prove that that fraud and corruption has been normalised in government institutions, and this should not be the case. Officials need to be held accountable and responsible for their unethical actions

Mhelembe and Mafini (2019:10) claim that unethical behaviour involving fraud and corruption costs the South African government significant amounts of money each year in unnecessary and wasteful spending. According to Mhelembe and Mafini (2019:12) the South African government, for instance, spent almost R26,4 billion in 2014 for corruption and rule and policy violations. Furthermore, the problem is being made worse by the shortage of qualified SCM personnel, which remains one of the main obstacles to the expansion of corporate operations in South Africa. Moreover, among the numerous issues confronting public sector SCM are inadequate planning, excessive decentralisation of the procurement process, poor monitoring and assessment, and noncompliance with existing regulations (Mhelembe and Mafini 2019:15).

d) *Risk management*

The study's findings concluded that there is an Audit Committee at the GDID that is accountable for monitoring the department's risk management operations. Their oversight extends to the review of reports presented by the Risk Management Committee, which directly reports on how risks are managed within the department. After a thorough examination of the risk register and subsequent reports, DID acknowledges and commends the progress in maturing of the risk management processes.

*"...In healthcare, risks like supply shortages, transportation delays, or regulatory changes can have severe consequences. Risk management strategies help in preparing for and responding to these challenges."* (Participant 3)

To effectively manage the significant risk exposures faced by the department, it is obvious that some processes and regulations must be modified. The management team must ensure that the department's strategic register is completed on time. This ensures that risk mitigation strategies exist and can be implemented efficiently.

Findings from the literature also state that management is responsible for fully owning and directing the Enterprise Risk Management Process in DID. This includes providing unwavering assistance to the Chief Risk Officer in an effort to improve the department's risk management performance. The Audit Committee anticipates and looks forward to seeing the department's risk management efforts continue to develop and mature.

Compared to most of the segments, healthcare supply chains face even more complicated challenges since they must pursue traditional supply chain indicators and deal with a very sensitive service that involves a great deal of subjectivity that is providing affordable quality care in a context where costs are always increasing. Healthcare supply chain managers daily deal with the dilemma of mitigating risks costs versus costs and losses caused by the risks, in addition, managers must consider that minimising costs cannot result in lesser care for the patients (Senna *et al.* 2024:04). Therefore, it is crucial that health facilities can identify capabilities that help mitigate the negative impacts of disruption risks.

e) *High cost of infrastructure*

Acquiring and maintaining healthcare infrastructure, can incur significant expenses. The study's findings stated that higher costs may arise from the need for monitoring security situations in certain areas, which could entail significant risks when visiting construction sites, and limited planning capabilities associated with such circumstances (Collier *et al.* 2013:05).

The study's findings reveal that DID is implementing green infrastructure technologies in schools, libraries, clinics, and hospitals as part of high-performance buildings in line with the Gauteng Green Agenda. The high-performance buildings have the following smart capabilities:

- Green construction technologies
- Roof insulation that keeps buildings at room temperature
- Glazing that maximises natural light into the building and reduces energy loss from the building
- Energy-saving lighting (LED light fittings)
- Energy-saving solutions
- Attenuation ponds that retain water for irrigation
- Landscaping that helps provide cooler temperatures in the surroundings

The above is implemented as part of DID's commitment to help protect the environment so that the communities may live in healthier and more sustainable conditions.

According to Mntu (2024:135) statistics South Africa (2019) states that high success levels in many countries are generally attained through investment in basic public infrastructure as this boosts social and economic development. However, the majority of social infrastructure in South Africa is still poorly located and compounded by an alarming infrastructure deficit, especially in provinces such as the Eastern Cape. The Eastern Cape is one of the poorest provinces in South Africa (Eastern Cape Infrastructure Plan 2016).

Factors affecting health infrastructure delivery have generally been delineated into three categories: bureaucratic factors, organisational factors and technical factors. According to Jacobs *et al.* (2021:134) bureaucratic factors comprise corruption,

maladministration, lack of governance and delivery management practices; Organisational factors lack of management capacity, external funding, monitoring and checking processes, payment delays to service providers and poor procurement practices; technical factors identified are defects in identification, assessment, and preparation of infrastructure projects, lack of training programmes for employees, frequent changes in project teams and long processes of administering infrastructure projects.

The above paragraphs prove that health infrastructure SCM remains a challenge not only in Gauteng but in other provinces such as in the Eastern Cape.

#### **5.4 Chapter summary**

This chapter presented a discussion of the findings of the study and formulated interpretations of the results. The results confirmed the existence of challenges within the Health Infrastructure Supply Chain Management (SCM) system at GDID. The respondents possess a clear understanding of their responsibilities and the expectations within the department. The study reveals that enhancing transparency through mechanisms such as data sharing, collaborative platforms, and real-time tracking technologies is critical for reducing risks and increasing agility. The succeeding chapter provides recommendations and conclusions that were drawn from the study.

## CHAPTER SIX

### CONCLUSION AND RECOMMENDATIONS

#### 6.1 Introduction

This chapter summarises the research and offers recommendations and conclusions derived from the study's findings. The study investigated the health infrastructure SCM processes within the GDID. It aimed at exploring and understanding the perceptions and experiences related to health infrastructure supply chain management within the GDID, investigating the role of various stakeholders in the health infrastructure SCM process at the GDID, exploring the challenges faced by the health infrastructure SCM Department within the Gauteng Department of Infrastructure Development and consequently making recommendations to avoid and or address the challenges faced by the department.

#### 6.2. Recommendations

This section of the chapter focusses on offering recommendations based on the findings, analysis and conclusions of the research study to fulfil the fourth research objective: to offer recommendations as to how the GDID may implement SCM processes to avoid and/or address challenges.

- In order to achieve the ideals of good governance and to address deficiencies in supply chain management, the researcher recommends that fundamental institutional reforms will have to be implemented. Such reforms need to promote efficient and effective procurement and provisioning systems and practices that enable the government to deliver the required quality and quantity of services to its clients. The establishment of uniformity in procedures, policies, documentation, and contract options and the implementation of sound systems of control and accountability should form the cornerstone of institutional reform.
- Another challenge that was noted was the lack of skilled and qualified SCM practitioners not being employed; therefore, the researcher recommends that to be able to implement SCM successfully, qualified

SCM practitioners should be employed. This will ensure that the right personnel are in the right place at the right time. The next step would be to engage in ongoing training and to introduce learnership programmes in SCM to create awareness of policy guidelines and regulations. This will create knowledge and skills and solve the problem of capacity. It is essential to recruit and retain skilled professionals who possess knowledge of healthcare regulations, technical specifications, and project management, as they play a critical role in the successful management of infrastructure supply chains.

- The researcher further recommends that a customised policy on SCM needs to be developed as required in the SCM policy to suit the needs of the department. Monitoring and performance measures need to be created for every department. This will help to evaluate SCM performance and ensure that guidelines and principles are adhered to. The implementation process will be boosted by the induction of incentive measures for hard-working practitioners. This will motivate SCM practitioners to strive for better performance and limit unethical practices.
- Various human resources management practices influence the impact of human capital on supply chain efficiency and business innovation. Companies that effectively align and balance their human resources management with SCM are likely to enhance their performance (Santa *et al.* 2022:02). In this regard, human resource practices can significantly contribute to the firm's capability in SCM, both within the organisation and across inter-organisational relationships, ultimately driving high performance. This is achieved through the establishment of strategic partnerships, the promotion of intra-organisational and inter-organisational learning, the cultivation of trust, and the fostering of synergy among different involved firms.
- To address the challenges identified in the preceding chapters, a strategic approach is necessary. One that integrates SCM seamlessly

with overall hospital operations, clinical workflows, and organisational objectives. Collaboration among supply chain managers, facility managers, clinical staff, and administrative leadership is vital for overcoming infrastructure supply chain hurdles and guaranteeing the provision of high-quality patient care. Through adept management of these challenges, organisations can optimise their supply chains to meet customer expectations, gain competitive advantage, and foster sustainable growth.

### **6.3. Implications of the study**

The findings of the study are vital towards improving the implementation of health SCM processes in GDID. This is because the study helped in identifying the challenges hindering effective implementation of SCM processes in order to improve health infrastructure service delivery. Based on the findings, a few recommendations were identified, including that monitoring and performance measures need to be created for every department as it will help to evaluate SCM performance and ensure that guidelines and principles are adhered to.

This study serves as an input, not only to the academic body of knowledge but also in enhancing the general understanding of the significance of the procedures and processes of health infrastructure SCM. This study will further assist in developing frameworks and guidelines that will add value in addressing the challenges that are encountered by health infrastructure SCM units.

Although this study has provided an analysis of the health infrastructure supply chain management processes, there remain more areas of exploration in this regard. Given that this study employed a qualitative research approach, the research population consisted of a small number of respondents. Future research assessing the effectiveness of the health infrastructure SCM can be conducted using a quantitative approach to survey a much larger pool of respondents.

### **6.4 Conclusion**

The study investigated the health infrastructure SCM processes within the GDID. It aimed at exploring and understanding the experiences and perceptions related to

health infrastructure SCM within GDID. Furthermore, it aimed at investigating the role of various stakeholders in the health infrastructure SCM process at GDID. The researcher was able to understand the topic under study through the experiences of identified officials within the Gauteng Department of Infrastructure Development who are actively involved in day-to-day SCM processes. The study utilised semi-structured interviews to collect data.

The review of literature highlighted and confirmed the existing relationship between Public Administration and SCM, specifically how the Public Administration influences the procedures and implementation of SCM. The review also pointed out the role that SCM employees should play in ensuring the provision of quality services to clients. The researcher has learnt that the RSA government was made aware of several issues regarding previous procurement processes prior to 2003. These systems were mostly said to be connected to egregious errors. Among the disorders of these previous procurement models were inadequate responsibility and auxiliary organisations, disjointed procedures, and uneven implementation of regulations.

The findings revealed that SCM is seen as critical to healthcare success but requires ongoing improvement, innovation, and collaboration to address challenges and ensure optimal performance. Furthermore, findings revealed that miscommunications between departments lead to delays and errors, underscoring the need for better coordination.

Interviews with participants confirmed the existing challenges within the Gauteng Department of Infrastructure Development. The findings highlighted that during DID's project implementation, the department has encountered various challenges, including changes in project scope, cash flow issues faced by contractors, and community unrest leading to delays in project completion. In some instances, these difficulties have caused contractors to abandon the sites. Additionally, the unfavourable global economic outlook has led to reduced budget allocations for projects, further impacting their execution.

This study concludes that the challenges in health infrastructure SCM can have far-reaching implications for organisational performance. These challenges can affect everything, from patient care and financial health to staff morale and competitive

positioning. Addressing these challenges effectively is crucial for maintaining high performance, ensuring patient satisfaction, and securing the long-term success of the organisation.

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## ANNEXURE A: PHASE 1 ETHICS APPROVAL LETTER



Ethics Phase1 Approval.pdf

## ANNEXURE B: PHASE 2 ETHICS APPROVAL LETTER



Ethics phase 2 approval.pdf



**ANNEXURE C: GAUTENG DEPARTMENT OF INFRASTRUCTURE  
PERMISSION LETTER TO CONDUCT THE STUDY**

**GAUTENG PROVINCE**

INFRASTRUCTURE DEVELOPMENT'  
REPUBLIC OF SOUTH AFRICA

**SUBMISSION**

Email: [marcina.usmannorman@gauteng.gov.za](mailto:marcina.usmannorman@gauteng.gov.za)

Ref: motivation for a student to conduct research within

DID

Tel: 07694444578

To: Ms.M.Mutlaneng  
Head of Department

FROM: Mr. Lengs Luxolo  
Chief Director: IRPS

SUBJECT: Motivation for approval of master student Miss Exar Mhlongo from the University of Pretoria to conduct her research at the Department of Infrastructure Development.

---

**1. PURPOSE:**

To obtain approval for a master's student to conduct her research within the Gauteng Department of Infrastructure Development

**2. BACKGROUND:**

Master of Administration student Miss Exar Mhlongo in the School of Public Management at the University of Pretoria

"Provincial infrastructure supply chain management at the Charlotte Maxeke Johannesburg Academic Hospital"

**3. INTRODUCTION**

Supply chain continues to be a path for service delivery, therefore adjustments made, or the introduction of new regulatory frameworks have led to consistent advancements in the field. The Gauteng Department of Infrastructure

Development (GDID) has as one of its main goals "making a better life for all" by way of the provision and upkeep of infrastructure for public institutions such as public schools, public hospitals, public clinics, and frail-care facilities. Other priorities include the creation of decent work, the development of an expanding, all-inclusive economy, and the promotion of standard education and skill development (Department of Infrastructure Development 2018:12).

In May 2010, the primary organisational structure of GDID comprised "the Head of Department (HOD) and four distinct branches: Corporate Services, Office of the Chief Financial Officer, Property Management, Infrastructure Development, and the Expanded Public Works Programme" (Department of Infrastructure Development 2018:12). This purpose of this research is to delve into the Supply Chain Management (SCM) procedures within GDID overall, with a specific focus on the Charlotte Maxeke Johannesburg Academic Hospital.

4.

- Interview Schedule is attached.
- Research Proposal is Attached.
- The Application form to conduct research within the department is attached. ■  
Also, attached to this Memorandum.

## 5. FINANCIAL IMPLICATIONS

There are no financial implications incurred in this submission.

## 6. COMMUNICATION AND STAKEHOLDERS

| INSTITUTIONS/ HEAD OFFICE/S | Cross the Relevant institutions here |
|-----------------------------|--------------------------------------|
| Supply chain management     |                                      |
|                             |                                      |

## 7. RECOMMENDATIONS:

It is hereby recommended that the student Miss Exar Mhlongo be given permission to conduct her study "Provincial infrastructure supply chain management at the Charlotte Maxeke Johannesburg Academic Hospital" at the Department of Infrastructure Development.



**Ms. E. Mkhatsywa**

Director: Research and Knowledge Management

Date: 10/06/2024.



Mr. Lengs Luxolo

~~Supported/Not Supported/Supported as Amended~~

Chief Director IRPS Date:

13/06/2024

It is hereby approved that the student Miss Exar Mhlongo be given permission to conduct her study "Provincial infrastructure supply chain management at the Charlotte Maxeke Johannesburg Academic Hospital" at the Department of Infrastructure Development.



Ms. M. Mutlaneng

Head of Department: Gauteng Department of Infrastructure Development

Date:

27/06/2024

Approved/not Approved / Approved with amendments.

For Ms Mhlongo to  
Research in the Dept.  
Thabane

co(i)

## ANNEXURE D: INTERVIEW SCHEDULE

**Semi-structured interview schedule administered to GDID Procurement SCM department.**

**Research title:** Provincial infrastructure supply chain management at the Charlotte Maxeke Johannesburg Academic Hospital

**Interviewer:** Exar Mhlongo

**Date of interview:** September 2024

**Approximate duration of interview:** 30-40 minutes

The purpose of the study is to delve into the Health Infrastructure Supply Chain Management (SCM) procedures within the Gauteng Department of Infrastructure Development (GDID) overall, with a specific focus on the Charlotte Maxeke Johannesburg Academic Hospital, and explore the challenges faced in order to gain an in-depth understanding of the policies governing Health Infrastructure SCM and its implementation.

### Section A: Biographical information

| Main Category | Sub-category       | Please mark with an (X) where applicable |
|---------------|--------------------|--|
| Department    | SCM                |  |
|               | Cooperate services |  |
|               | Communications     |  |
| Age           | 18-25              |  |
|               | 26-35              |  |
|               | 36-49              |  |
|               | 50-60              |  |

### Section B: Semi-structured interview questions

#### UNDERSTANDING Health Infrastructure SCM

1. What does the term SCM mean to you?
2. What are the core components and functions of Health Infrastructure SCM?
3. What are your duties/responsibilities in the department?

4. What challenges do you come across in Health Infrastructure SCM department?
5. What are the implications of these challenges on organisational performance?
6. What do you think can be done to address the above-identified challenges?

### **PERCEPTIONS AND EXPERIENCES IN HEALTH INFRASTRUCTURE SCM**

7. What experiences have led to positive and/or negative perceptions of SCM in health infrastructure?
8. How do policies and legislation shape the perceptions of SCM in health infrastructure?
9. How can health infrastructure SCM be improved based on your experiences and perceptions within GDID?

### **INFRASTRUCTURE COSTS AND LIFECYCLE MANAGEMENT**

10. What are the challenges associated with acquiring and maintaining infrastructure in healthcare settings?
11. How does GDID balance budget constraints with the need for infrastructure upgrades?
12. What strategies can be employed to improve lifecycle management and sustainability of infrastructure assets?

### **CONTRACTING AND OUTSOURCING IN PUBLIC HEALTH SECTOR**

13. What are the advantages and disadvantages of outsourcing and contracting out public services, particularly in the healthcare sector?
14. How does your department ensure transparency, fairness, and accountability in procurement processes and contract management?
15. What mechanisms are in place to ensure transparency and accountability in procurement processes and contract management?

### **ADDITIONAL COMMENTS**

16. As we conclude, what other additional comments do you need to bring to the attention of the researcher?

**THANK YOU**

## ANNEXURE E: LETTER OF INTRODUCTION AND INFORMED CONSENT

### Combined Letter of Introduction and Informed Consent

#### Department of Economic and Management Sciences

#### *Provincial infrastructure supply chain management at the Charlotte Maxeke Johannesburg Academic Hospital*

Research conducted by:

Ms. E Mhlongo, u17066485, 0766676775

Dear Participant

You are invited to participate in an academic research study conducted by Exar Mhlongo, a Masters student from the Department of Economic and Management Sciences at the University of Pretoria.

The purpose of the study is to delve into the Supply Chain Management (SCM) procedures within the Gauteng Department of Infrastructure Development (GDID) overall, with a specific focus on the Charlotte Maxeke Johannesburg Academic Hospital and explore the challenges faced in order to gain an in-depth understanding of the policies governing SCM and its implementation.

Please note the following:

- This is an anonymous study, and your personal information will not appear on any transcript. The responses you give will be treated as strictly confidential as you cannot be identified in person based on the answers you give.
- Your participation in this study is very important to us. You may, however, choose not to participate and you may also stop participating at any time without any negative consequences.
- I understand that all data collected for this study will be stored on a safe and secure platform as governed by the University of Pretoria's Research Data Management Policy.
- Please answer the questions in the interview as completely and honestly as possible. This should not take more than 30 minutes of your time.
- The results of the study will be used for academic purposes only and may be published in an academic journal. We will provide you with a summary of our findings upon request.

Please contact my study leader, Dr. M Mangai, at [mary.mangai@up.ac.za](mailto:mary.mangai@up.ac.za) if you have any questions or comments regarding the study.

In research of this nature, the study leader may wish to contact respondents to verify the authenticity of data gathered by the researcher. It is understood that any personal contact details that you may provide will be used only for this purpose and will not compromise your anonymity or the confidentiality of your participation.

Please sign the form to indicate that:

- You have read and understand the information provided above.
- You give your consent to participate in the study on a voluntary basis.

---

**Participant's signature**

---

**Date**