

University of KwaZulu-Natal • Pietermaritzburg

**Evaluation of supply chain processes in the Department of Economic Development,
Tourism and Environmental Affairs in Pietermaritzburg**

By

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ABSTRACT

Supply chain management (SCM) has become an integral part of the public sector ever since South Africa's 1994 first democratic elections. This presented the need to revisit the socio-economic and political direction of the country. The new government faced significant challenges; one of these was a need for public sector transformation. The government introduced new processes, legislation, and policies. The National Treasury introduced strategies to improve service delivery. In 2003, the South African Government introduced the SCM framework with the idea of creating a unified system that positively impacts service delivery while achieving effectiveness, fairness, equity, transparency, and ethics. The main aim was to line up the SCM framework with the best practices within the public sector.

The effectiveness and efficiency of SCM are of paramount importance to the operations of the public sector. Notwithstanding many public sector attempts to improve SCM, however, strikes continue due to poor service delivery. Therefore, this led to the desire to evaluate the supply chain management process for the public sector. This study evaluates SCM processes at the Department of Economic Development, Tourism, and Traditional Affairs in Pietermaritzburg. This researcher believes that the lack of proper SCM systems could lead to poor service delivery; hence, evaluating the supply chain process can improve organizational performance and service delivery.

The study adopted a mixed research method in the collection of data. This method involved two steps of gathering primary data. Qualitative data was collected through interviews conducted with SCM managers, and quantitative data was collected through questionnaire surveys. The closed-ended questionnaires were distributed via Survey Monkey to EDTEA SCM employees. The researcher used purposive sampling because it gives the researcher a choice. Quota sampling was used in proportionate stratified sampling to subdivide the group into two parts. The data collected by questionnaires was analyzed using Survey Monkey software with support of descriptive. The data collected by interviews was analyzed using thematic analysis in which it was systematically examined to develop similarities between the emerging ideas on supply chain processes. This was done through data transcription, sorting, categorizing, synthesizing data, and identifying the crosscutting themes that are linked to the research objectives; those themes were translated into informed discussions. The findings reveal that SCM practices are aligned with policies derived from the National Treasury. The most implemented SCM practices are demand, acquisition, assets and disposal, and logistics management. The least implemented are risk, contract, and performance

management. However, there is a need to improve the applied elements such as demand acquisition, assets and disposal, and logistics management. The study reveals that although the SCM unit is using policies and legislative frameworks derived from the Treasury, the group receives queries from the Auditor General (AG); however, it is revealed that the questions originate from the project managers' errors. The study also reveals that the unit is performing above average. Based on the results, there is a need to recruit qualified and experienced staff and develop skills, knowledge, and competencies to improve planning interventions, create partnership with stakeholders, and create incentives and rewards.

Key Words: Supply Chain Management, Supply Chain, Procurement Process, Legislative Frameworks, Public Sector, Performance, Service Delivery.

DEDICATION

I dedicate this mini dissertation to my Heavenly Father, who made it possible to study this degree under the almost impossible conditions (financial constraints). When God says, “YES”, no one can say “NO”. Thus, this dissertation has come to be.

“All things are possible through Christ who strengthens.”

I dedicate this to my mom (Nombulelo Nokuphumla Khamsholo Nkenkana) and everyone from my maternal side. Mom, I don't have many words to say besides, “ENKOSI WETHU MAMA – THANK YOU”.

DECLARATION

I, Nkenkana Yanga (Student number: 217077362), declare that this mini-dissertation titled **“Evaluation of Supply Chain Processes in the Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg”** is my work and where I used sources, I have acknowledged them using in-text and complete references.

This report is submitted in partial fulfillment of the degree of Master of Commerce in Management requirements at the College of Law and Management Studies, School of Management, Information Technology and Governance, University KwaZulu-Natal.

It is the first time to submit this for examination; not just at the University of KwaZulu-Natal, but at any University.

Nkenkana Yanga.....

Date.....

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LIST OF ACRONYMS

AG	: Auditor General
AO	: Accounting Officer
BAC	: Bid Adjudication Committee
BBBEE	: Broad Based Black Economic Empowerment
BEC	: Bid Evaluation Committee
BSC	: Bid Specification Committee
CIDB	: Construction Industry Development Board
CSD	: Central Supplier Database
DTI	: Department of Trade and Industry
EDTEA	: Department of Economic Development and Environmental
FMA	: Financial Management Act
HDI's	: Historical Disadvantaged Individuals
KZN	: KwaZulu-Natal
PFMA	: Public Finance Management Act
PMB	: Pietermaritzburg
PPPFA	: Preferential Procurement Policy Framework Act
QEC	: Quotation Evaluation Committee
QSC	: Quotation Specification Committee
ROI	: Returns on Investments
RSA	: Republic of South Africa
SC	: Supply Chain

SCM : Supply Chain Management
SCMPF : Supply Chain Management Procurement Framework
SITA : State Information Technology Agency
SMME's : Small, Medium and Micro Enterprises

DEFINITION OF TERMS USED IN THE STUDY

Supply chain management is a vital part of financial management that tries to find to introduce best practices while also addressing government preferential procurement policy framework objectives. It is design of flawless, value-added processes across institutional borders to meet the solid needs of the customers.

Supply chain is the activities required by the institutions to deliver goods or services to customers.

Procurement Process is a sequence of actions necessary to obtain goods and services from an external source.

Public Sector is the part the economic systems that is controlled the three sphere of government (national, provincial, and local sphere) and provides services. This sector consists of services such as Health care, Security, water and waste management, and accommodation and infrastructure.

Service Delivery is defined as the performance of work by which a department and its officials are using or have power to control the systems and resource at hand to provide the public with necessities.

Service delivery performance relates to the extent to which the supply chain component effectively and efficiently meets the required needs of their customers and stakeholders as stated by the service delivery objectives.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Supply Chain Management (SCM) in today's business environment has gained popularity as it makes an essential contribution to the service delivery. SCM in the public sector has gained more acceptances due to the increasing demands of service delivery. In the South African public sector, SCM is regarded as an integral part of financial management (Ambe, 2015). According to the Treasury (2003a), SCM was adopted due to the inadequacies in implementing public procurement processes. Therefore, the procurement processes were reformed to promote corporate governance principles and address socio-economic challenges affecting previously disadvantaged communities. However, in many departments, these systems still lack accountability and proper implementation (Ambe, 2015). Moreover, despite the reform of the public procurement processes and SCM's application as a strategic tool, the attainment of the envisioned socio-economic goals is still an uphill battle for many departments (Bizana et al., 2015b).

Ambe (2016c) asserts that policies to govern SCM implementation in all government spheres were developed. Each department had to choose systems that would enable it to fulfill its mandate. By accepting SCM practices, national, provincial, and local government and state-owned enterprises are expected to execute SCM functions effectively and efficiently to ensure that their objectives are realized.

Protests and marches have been perceived to be prompted by poor implementation of supply chain processes, lack of ability to perform, and inadequate monitoring and management in each stage of the process. SCM approaches are essential to ensure that departments deliver quality goods and services to the public. Moreover, they also ensure that there is sustainable delivery of goods and services at affordable prices (Mokotedi, 2016).

Ngxesha (2015) asserts that the government is there to advance the welfare – educational, social, and economic – of South Africans, especially those who were previously disadvantaged. Government departments can do this by applying policies in their programs that empower

previously underprivileged citizens. Government procurement is perceived as a strategy to motivate Small, Medium, and Macro enterprises (from now on SMMEs).

In 1999, Budgetary and financial reforms were launched to promote public accessibility and transparency (Mokotedi, 2016). However, the commonality of public protests in South Africa shows poor SCM implementation and a lack of confidence in the public sector. Daily reports on irregularities in the mainstream and social media show that most government departments fail to comply with relevant SCM prescriptions (Ambe, 2016b).

In this study, SCM in the public sector, particularly the Economic Development, Tourism, and Environment Affairs (from now on EDTEA), is discussed.

1.2 BACKGROUND TO THE STUDY

SCM and procurement are related, thus it is fitting to unpack these two terms together. Public procurement is defined as the departmental functions that directly identify need, sourcing, and access while managing the external resources that an organization may require to achieve strategic objectives (Mazibuko, 2018). SCM is a newer idea that deals with the entire procurement process.

SCM identifies the need, acquisition, logistics and management of received goods, and the capabilities the organization needs to achieve its stated objectives. It is an integrated function for connecting the organization's internal activities across the organization into an organized and well-performing organizational model (Maleka, 2016). It also includes organization and alliance with channel partners including suppliers, intermediaries, third suppliers, and customers.

SCM is a process that manages the flow of material, information, and services to create what customers perceive as value, while utilizing organizational resources effectively and efficiently (Mathinye, 2016). Some authors such as Ambe and Badenhorst-Weiss (2012) state that SCM involves combining all business functions, including sales marketing, research and development, logistics, purchasing, information technology, and finance.

Supply chain systems have been adopted by all departments, including EDTEA. This was adopted to make officials accountable for government funds. SCM is used as an instrument to manage financial resources in buying goods and services (Ambe, 2015).

Procurement in the public sector is a process of acquiring goods and services from external service providers to meet government needs. The acquisition is used as an instrument to improve the social and economic standards of the public. In the South African context, it is regarded as an activity to close the gap between the first and second class economies formed by the Apartheid regime (Fourie, 2015).

According to Ambe (2016d), procurement is a fundamental part of service delivery that promotes social and industrial and environmental policies. He further supports (Fourie, 2015), who argues that procurement in the public sector in South Africa has been given a constitutional position to address past discriminatory policies and practices.

Dzuke and Naude (2015) state that procurement's main objectives in the public sector are to reduce spending costs, promote transparency, protect federal funds, and minimize corruption. They further state that public procurement is used to promote the efficient and effective use of public funds and provide service delivery through competitive bidding.

SCM has gained popularity in recent years. According to Maleka (2016), due to the increase in customers' demand for quality goods and services delivered at high speed, SCM has gained acceptance. Hence, SCM principles are based on the coordination and integration of demand, supply, and relationships to satisfy customers while using financial resources effectively. Therefore, it comprises the planning, monitoring, and managing of all functions involved in procurement.

In 1998, SCM was introduced in the Republic of South Africa as a philosophy to manage financial resources that are allocated to provide goods and services for the public, and in a way that is accountable to the public. "This is stipulated in the Constitution of the Republic of South Africa Act 5 of 2005, Section 2017 (1) which states that in the case that any demand of goods and services by the arms of government, it must be delivered in a fair, equitable, transparent, competitive, effective and efficient manner" (Deka, 2016). According to Mokotedi (2016), SCM was introduced in the public sector to move from operating under the standard purchasing systems to a more integrated system. This was accomplished through the implementation of the SCM policy by the cabinet. The main aim of implementing the policies was to improve SCM functions in all spheres of government, to serve as a critical part of financial management, and adapt to good international practices.

Section 40 (1) of the Constitution allocates administrative power to national, provincial, and local government spheres: interrelated, interdependent, but distinctive (Ngobeni, 2016).

1.3 RESEARCH PROBLEM

Although the parliament of South Africa has been active in the past years, the truth is that SCM systems are still in the developing process. In 2015, new SCM regulations were introduced to improve the implementation process. These regulations were introduced to apply to all government spheres. One pillar represents staff excellence, including upgrading, staff motivation and identifying the gaps in the system (Okojie, 2017). Therefore, the concern of this study is that although systems and legislative frameworks were developed, there is lack of proper implementation of these systems and this has resulted in poor service delivery and failure to achieve the desired outcomes. Therefore, the evaluation of supply chain systems can improve organizational performance and service delivery (Deka, 2016).

1.4 RESEARCH QUESTIONS

This research study investigates the following questions:

“Does the evaluation of SCM processes reinforce the good implementation of the supply chain in the public sector”?

- ❖ What are SCM processes adopted by the department?
- ❖ What are the outcomes of SCM processes in a government department?
- ❖ Can the effectiveness of the SCM processes make the implementation easier?
- ❖ What are legislative frameworks that guide EDTEA supply chain and its impact on supply chain operation processes?

1.5 AIM AND OBJECTIVES OF THE STUDY

This study aims to assess the EDTEA supply chain processes and how they are implemented, to identify if the department functions are done according to relevant prescripts and principles and determine whether deliver the primary purpose of the public sector supply chain.

The main objectives of this study are:

- ❖ To evaluate SCM processes adopted by the department.
- ❖ To analyze the outcomes of SCM processes in a government department.

- ❖ To examine the effectiveness of the SCM processes used in the department.
- ❖ To investigate and understand the legislative frameworks that guide the EDTEA supply chain, and their impact on supply chain management operation processes.

1.6 STUDY AREA

The head office of the Department of Economic Development and Environmental Affairs is in the capital city of KwaZulu-Natal at 270 Jabu Ndlovu Street in Pietermaritzburg, uMgungundlovu District Municipality. The KwaZulu-Natal Department of EDTEA is assigned to oversee socio-economic improvement at a provincial level. The Department has built partnerships with different stakeholders (civil society and the private sector) to achieve this. Beyer, Peterson and Sharma (2003), state that stakeholders' participation is essential to develop a comprehensive strategy and partnership improves economic growth.

The Department's long-term goals are to lead in planning, designing, and implementing ways to achieve economic growth. Overall economic growth creates job opportunities, provides seeds for transformation, and enables competitive performance through excellence.

1.7 RESEARCH DESIGN AND METHODOLOGY

Open-ended interviews and closed questionnaires were used to collect primary data. These interviews were conducted only with SCM managers, and questionnaires were distributed to SCM officials only.

1.8 PARTICIPANTS

Participants were categorized into two groups: SCM officials (17 officials) and managers (5 managers) at the EDTEA Pietermaritzburg region. The participants were divided into two groups because of the time; it was impossible to conduct interviews with all of them. Therefore, interviews were conducted only with the SCM managers as critical participants. The questionnaires were developed on Survey Monkey. The link was sent via emails, with an introduction on how to get into the link.

1.9 DATA ANALYSIS

Data analysis involves describing data from research instruments, interpreting data, and drawing conclusions (Maleka, 2016). After data collection for the study, data was analyzed and interpreted. The study used a mixed-method approach; the data collected by interviews was first transcribed

using a tape recorder and later analyzed using thematic analysis. The questionnaires were developed and analyzed on Survey Monkey.

1.10 DELIMITATION OF THE STUDY

The study was conducted only in the Pietermaritzburg EDTEA region. The participants of the study were SCM employees or practitioners in the department. The selection excludes potential contributions from other stakeholders not directly connected to the department's SCM.

Despite the declared limitations, understanding of the topic was achievable through this study. A conclusion was reached and can be used as a base of reference for academics, public sector institutions, experts, and interested public members.

1.11 IMPORTANCE OF THE STUDY

This study's importance is that it assesses SCM processes at EDTEA in terms of how the department implements each process in line with relevant prescripts. SCM is essential, primarily when it is appropriately implemented, because it reduces fruitless expenditure. Efficiency in SCM is also essential because it serves as a warrant for delivering goods and services to the public (Deka, 2016). Therefore, it is further recommended that EDTEA knows where the department is in terms of compliance. Maleka (2016) defines SCM as an integral part of judicious South African public sector financial management. The study is essential for the following reasons:

- It provides an understanding of SCM with EDTEA.
- It adds to the growing literature on SCM, especially in the public sector.

1.12 LAYOUT OF THE CHAPTERS

This work is divided into the following chapters:

Chapter One

Chapter one outlines the stages followed by the study including the introduction, the background of the study, research problem, research questions, aims and objectives of the study, definition of terms, research design and methodology, delimitation of the study and importance of the study, and the study outline.

Chapter Two

Chapter two focuses on SCM literature. In this section, the researcher presents theoretical frameworks that are used in SCM and identifies which theories underpin the study.

It focuses on, firstly, the conceptualization of SCM; secondly, the aims and objectives of SCM in the public sector; thirdly, the dimensions of SCM and how these dimensions can be addressed; fourthly, the historical establishment of SCM in the South African public sector, and difficulties in managing and controlling the public sector supply chain; and fifthly, the implementation of SCM processes in the public sector. Generic elements of SCM in the public sector cover how these elements can be executed while complying with policies and legislation. In essence, this chapter also covers the policies and legislation of SCM.

Chapter Three

Chapter three is an overview of the Department of Economic Development, Tourism, and Environmental Affairs (EDTEA), elucidating the location, role, vision, mission, and values. The chapter also discusses the strategic objectives, financial management, and supply chain management of the department.

Chapter Four

Chapter four is the research design and methodology used to evaluate the supply chain processes. The chapter discusses the research approach, data collection methods, and how they are used in the study.

Chapter Five

Chapter five is the analysis and interpretation of the data collected during the interviews and with questionnaires. The findings of the research on the evaluation of SCM processes in the public sector are analyzed.

Chapter Six

Chapter six seeks to provide a solution to the problem statement and answer the research questions, as stated in Chapter One. Therefore, it provides a summary of the study based on the findings of the research.

Chapter Seven

Chapter seven discusses the recommendations to the SCM unit. The limitations are brought to the forefront. Finally, it provides suggestions for further research and the conclusion.

1.13 CONCLUSION

This chapter, as an orientation chapter, provides the background of the study. It identified the problem statement, research questions, aims, and objectives of the study, the area where the study was conducted, the research design and methodology, delimitations of the study, and the

importance of the study. The chapter ends by outlining each chapter. The following chapter two explores the supply chain implementation processes.

CHAPTER TWO

SUPPLY CHAIN MANAGEMENT IMPLEMENTATION PROCESSES

2.1 INTRODUCTION

This chapter seeks to contextualize the concept of SCM as defined by different authors. It presents the historical establishment of SCM by government, and international public sector SCM. Further, it looks at the strategic formulation of SCM in the public sector and discusses the implementation process. According to Kakwezi and Nyeko (2019), SCM functions have not been acknowledged in developing countries especially in the public sector. In South Africa, public procurement is expressed in the supreme law of all laws (the Constitution) and other legislative frameworks regulating procurement, based upon the principles of governance – accountability, transparency, value for money, fairness, and equity. The public sector serves as the market and participant regulator to regulate the procurement processes by establishing a regulatory framework.

Furthermore, identifying key actors in each process is paramount for evaluating the supply chain management process to see if these key role players are following the SCM prescripts.

The SCM literature review is derived from finished dissertations, academic articles, journals, and books (Ngobeni, 2016).

2.2 THEORETICAL FRAMEWORK

The concept of a theoretical framework is defined as an explanation which organizes concepts and provides a standard way to explain a particular fact. Therefore, theories explain “How” and “Why” something is done in a particular way (Matebese-Notshulwana, 2019). In this section, the researcher presents theoretical frameworks that are used in SCM and identifies which theories underpin the study.

Wernerfelt's (1984) resource-based view	Wernerfelt's (1984), the founder and advocate of RBV, believed that an organization has resources; the larger portion of these resources enables the organization to achieve a competitive advantage, and
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	the other portion contributes to long-term performance.
Oliver E. Williamson's (1979) transaction cost analysis	This theory is positioned at the heart of marketing activity and appeals to primary elements of marketing. It states that doing transactions is a costly endeavor which includes negotiating contracts, monitoring performance, and solving disputes, and includes various approaches of classifying transitions (Rindfleisch, 2019).
Otley's (1980) contingency theory	Researchers have different SCM perspectives but share a common idea that competitive success for supply chain is dependent on management's ability to be familiar with the changes in the competitive environment, and, in terms of implementation, for the organization to utilize its resources effectively and efficiently to meet the organization's demands (Ambe, 2008).
Lewin's (1951) force field theory	Force field theory refers to the ability to examine the environment to identify the forces of SCM, the barriers in the SCM implementation processes, and to apply ways to allow the actors of SCM to succeed in the competitive and changing environment (Ambe, 2008).
Ludwig von Bertalanffy's (1940s-50s) systems theory (ST)	This theory studies systems as they relate to one another in a more complex way. This is applied in all disciplines.

Jensen and Meckling's (1976) principal-agent theory	This summarizes the idea that public sector performance can be improved if incentive-based contracts between different actors are implemented. Agency theory has had substantial influence on the speculation and practice of policies and the administration in the public sector from the 1970s. In the 1980s and 1990s, it has been a helpful instrument in the developed countries, resulting in radical public sector reform (Elsig, 2011).

Table 2.2: source: own source

Various theories have been used in different studies to understand why some systems succeed and others do not. Theories used include principal-agent theory, transaction cost analysis, the resource-based view, contingency theory, force field theory, systems theory (ST) and many more.

From the above theories, Treiblmaier (2018) uses four – principal agent theory (PAT), transaction cost analysis (TCA), also called transaction cost theory, resource-based view (RBV) and network theory (NT) – and believes that the four theories allow instantaneous consideration of structural and managerial aspects from the viewpoint institutional economics. Lavassani and Movahedi (2010) agree with Treiblmaier (2018) that the resource-based view is similar to transaction cost theory and is mostly concerned with the economic aspects of operations in organizations. According to Akenroye, Owens, Elbaz and Durowoju (2020), resource-based theory explains how organizations can position internal resources and capabilities to achieve the competitive advantage in a changing environment. This has been expanded by Eisenhardt and Martin (2000) to cover strategic practices and repetitive actions through which organizations realize new resource arrangements as the market develops, changes, and becomes redundant.

Additionally, Lavassani and Movahedi (2010) state that the resource-based view provides more imminent understanding of value systems in the organization as it emphasizes the importance of knowledge as a production factor in organizations. However, it is more concerned with the direct economic factors in organizations and that is why it fails to address some important aspects of the

operations of the organizational supply chain, including personal and human relations among actors in the supply chain.

Amber (2008) emphasized contingency theory by stating that although the viewpoint and direction on the supply chain varies, researchers share the common idea that success for a SC is based on the management's ability to be familiar with the changes in the competitive environment and direct their attention to the utilization of resources to achieve the desired objective. This common idea forms part of the contingency theory. However, a second theory, Lewin's (1951) force field theory, is used to refer to an ability to scan the environment for the forces driving SCM, to identify the potential barriers (or resisting forces), and to implement bridges, enabling SCM actors to maintain competitive success in changing environments and markets.

The last theory from the above list, principal-agent theory, hypothesizes that the interests of owners and managerial agents routinely diverge, and that managers can use the inherent information irregularity that arises from their positioning within a firm (Treiblmaier, 2018). The theory is supported by Kummer, Dobrovnik, Mikl and Schäfer (2020), as well as Shafiq, Johnson, Klassen and Awaysheh (2017). Matebese-Notshulwana (2019) states the same thing, that principal-agent theory is specifically appropriate to explain the responsible relationship between customers and the executive and the legislature on the one hand, and on the other, the relationship between executive and bureaucracy. However, they further state the weakness of the theory as it applies to legislative-executive relations rather than being accountable to the public. The citizens are not aware of what to expect from the agent and this allows the agents serve their own interest.

Kummer, Dobrovnik, Mikl and Schäfer (2020) used it to investigate how parties deal with uncertainty and asymmetry under a blockchain scenario, where the need for trust disappears and blockchain technology can help to solve agency problems. Shafiq, Johnson, Klassen and Awaysheh (2017) explored the implications of supply risk on sustainability.

Lavassani and Movahedi (2010), quoting Gripsrud, Jahre and Persson (2006), explored the historical background of the application of systems theory in supply chain management and specifically in the context of logistics. They argued that in the 1950's and 1970's, neoclassical theories were popular. However, from the 1970s, systems theory became the popular one in the functioning of organizational supply.

This study applies Ludwig von Bertalanffy's (1940s-50s) systems theory (ST) and Lewin's (1951) force field theory to understand how poor implementation of supply chain systems can influence service delivery and hinder the organization from achieving the desired goals, based on Ambe (2008) arguments on force field theory and Lavassani and Movahedi's (2010) critical analysis of the supply chain management theories – toward the stakeholder theory. The researcher premised the study on systems-based theory to explain the domain and functioning of organizational supply chain.

2.3 DEFINITION OF THE CONCEPT: SUPPLY CHAIN AND SUPPLY CHAIN MANAGEMENT

2.3.1 SUPPLY CHAIN

Today, most people have agreed on the basic definition of supply chain (SC) as an asset of more than one entity (individual and organizations) involved in the process of the flow of products, services information and finances to the targeted group (Ellram and Cooper, 2014, Sweeney et al., 2015). Supply chain is a collection of related organizations in terms of the upstream and downstream movement of products, services, finances, and information from the point of purchase to customers. Each stage in the SC is linked to another through the movement towards information, product, and finances (Bizana et al., 2015a, Maleka, 2016). The term “Supply Chain” indicates the flow of products needed by customers or institutions, as they go through many organizations (Ambe, 2016b).

2.3.2 SUPPLY CHAIN MANAGEMENT

Supply chain management involves the management and integration of the internal organization of upstream and downstream connections, to implement all activities effectively and efficiently to maximize customer satisfaction (Mokotedi, 2016). However, Deka (2016) states that prior to creating customer satisfaction, it is important to undertake five stages. These are: identification of material needs by the target group; identification of the potential suppliers; development, with a reasonable price for the materials; making an internal agreement on purchase; and making sure recognized suppliers are delivering enough goods and services. Maleka (2016) states that SCM terms are used to show internal and external processes of producing goods and services and ensuring smooth delivery to customers.

Supply chain management refers to a chain of facilities and alternatives of distribution that implement the activities to attain the products, from converting the raw material into transitional and complete goods, to delivering these products of the targeted group. In essence, SCM refers to the process by which goods and services get to the end-user to satisfy their needs (Ngobeni, 2016). Ngobeni (2016) further asserts that getting goods at the right time, place, with the right quality, and according to customer needs is only a way of improving competitive success and ensuring survival as a company.

According to Ellram and Cooper (2014), most people agree on the definition of the supply chain. However, point out that there is no agreement upon the definition of SCM. Therefore, there remains contention on what really constitutes SCM.

Moreover, Sweeney et al. (2015) state that lack of agreement on how SCM is defined raises the need for an integrated definition. They also relate that the "ambiguity" and "confusion" around the phenomena point out a need to review SCM definitions. Sweeney et al. (2015) further emphasize that although SCM was there in the 1980s, there was very little attention paid to it and there was not a strong understanding of it.

Tshilo and Van Niekerk (2016) contend the supply chain's definition concerns the purchase of goods and services, disposal of redundant assets, selection of suppliers to assist with what is needed, and the nomination of external SMMEs to provide goods and services based on the prescription. They further state that supply chain management can be termed as the progression of identifying, evaluating, nominating, managing, and developing service providers to create a supply chain performance that is far better than its competitor. The supply chain is a long-term win-win between purchasing institutions and nominated service providers.

2.4 AIMS AND OBJECTIVES OF SUPPLY CHAIN MANAGEMENT

The main objective of SCM is to increase organizational profit to satisfy end-users and customers. SCM is a crucial concept in today's environment as one of the bottom-line contributing factors (Ambe, 2016c).

Ngxesha (2015) contends the aims and objectives of the supply chain are to create the reliable delivery of goods and services, improve SC's responsiveness, create SC flexibility, optimize delivery costs, and create the efficient management of assets. Moreover, public procurement policy

has its objectives aside from SCM, such as value for money, integrity, accountability, and transparency, to allow competition between trade partners, efficiency, and to support the economy and previously disadvantaged communities. According to Ngobeni (2016), SCM is a vital part of government service delivery systems that promote primary and secondary aims: promoting industrial and environmental policies by promoting social factors.

2.5 DYNAMICS OF SUPPLY CHAIN MANAGEMENT

Supply chain dynamics in the public sector are evolving fast due to changes in supply chain technology. As the new technology in SCM and new systems are introduced, the public sectors need to work under pressure to cast off the old version of supply chain to support the new technology (Pradhan and Madonsela, 2019). According Trkman, Budler, and Groznik (2015), the supply chain operates within a competitive environment subjected to macroeconomic issues such as market conditions, increasing demand of the end-user, and changing needs in the main processes from corner to corner. Furthermore, every sector with SC must develop flexible business models. These dynamics of SCM are unpredictable in the sense that they arise from a variety of sources which include suppliers, stakeholders, customers or the community, and competitors.

According to Saad, Jones and James (2002), innovation is an interface between the dynamics of the process and the environment in which the organization operates. Pradhan et al. (2019) further state that extensive changes in the political and socio-economic environments show that the public sector needs to restructure their supply chain systems in order to sustain their competitiveness and effectiveness. Sweeney et al. (2015) state that supply chain activities in the past were managed traditionally and separately from each other, with some activities not having a real impact. The beginning of SCM approaches was a turnaround of preceding management strategies where institutions simply determined what they produced and supplied to customers. Radical changes have empowered customers to tell their suppliers about their expectations and how they would like to be met. Moreover, customers demand quality, well-designed products, and improved services (Ejodame, 2015). Ejodame, (2015) further states that customers also want flexibility, convenience, and variety of products. This has become an SCM trend and has brought uncertainties.

Addressing the dynamics of SCM requires the organization to have dynamic capabilities. Dynamic capabilities is the ability to integrate, build and re-arrange the internal and external competencies

to address the dynamics of a changing environment, and achieve new innovative aspect of a competitive environment (Trkman, 2015).

2.6 HISTORICAL ESTABLISHMENT OF SUPPLY CHAIN MANAGEMENT IN THE SOUTH AFRICAN PUBLIC SECTOR

In the South African government departments, SCM was introduced and enforced by the Constitution, which states, “any organ of the state in all different spheres of government or any other institution must recognize the national regulation in terms of purchasing goods and services or making contract arrangement, it must do so according to the principles of SC: transparent, fairness, allow competition, equitable and save costs” (Deka, 2016).

In 1995, the South African public sector SCM faced a change that led to the introduction of the concept of transformation in procurement. The aim of transformation was to promote corporate governance principles and the preference system's stages to support economic and social objectives (Mokotedi, 2016).

Procurement reforms in the South African (SA) government that started in 1995 were directed at two broad focus areas: promoting ethical governance principles and introducing a preference system to address specific socio-economic objectives.

SCM is an integral part of managing government finances, and the notion of SCM was adopted in 2003 due to the lack of proper implementation of the procurement process in the public sector. The procurement reform process was established and focused on corporate governance principles, and introduced the system to favor social and economic objectives (Treasury, 2000). According to Mokotedi (2016), citing Bizana et al. (2015b), the policy aimed to uphold consistency in the implementation of SCM policies and regulations and facilitate the standardization and understanding of these policies.

In the same year, 2003, the South African Cabinet adopted SCM to replace the out-of-date procurement practices. This reform process was supported by a number of legislative frameworks, including the acceptance of Public Finance Management Act (PFMA) and Preferential Procurement Policy Framework Act (PPPFA). The PPPFA was sanctioned by Section 217 of the Constitution and states the importance of implementing policies that give preference to the awarding of contracts and address discrimination. The PPPFA also states that when the

government assesses contracts, it must use a preference point system that evaluates according to the goals of functionality and price and the Reconstruction and Development Program (from now on RDP). Furthermore, in 2006, immediately after, approval for the Broad-Based Economic Empowerment Act (from now on B-BBEE) was revised by the Department of Trade and Industry (from now on DTI) and by the National Treasury to promote the advancement of B-BBEE Act (Selomo and Govender, 2016).

This transformation's main reason was to implement all functions of the supply chain across government spheres; it would be a fundamental part of financial management and would follow international practices. Matolong (2015) supported Bizana et al. (2015) by stating that the framework's vision was to create systems to intervene in service delivery and align government departments with preeminent practices. Moreover, this framework aimed to encourage standardization and consistent implementation of the SCM process across government departments. Another aim was to facilitate standardization and unchanging implementation of Preferential Policy Procurement Framework Act (from now on PPPFA) and other legislation, and achieve the ongoing financial management cycles as stated by the PFMA while promoting accountability to all supply chain actors, for example, the Accounting Officer (Bizana et al., 2015).

Before 2004, while the Constitution states any organ of the state at all levels of spheres when procuring goods and services must conduct the process in way that is a fair, equitable, transparent, and cost-effective and allow competition, nevertheless, the practice was not implemented; procurement and provision activities were rule-driven. Value for money was associated with the lowest price quote rather than budgetary planning. The bid documents were not uniform, which caused uncertainty to the bidders and SCM practitioners, and was associated with complexity and considered a challenge to implement. As mentioned above, the ideal led to the approval for a new strategy to monitor the uniformity of the procurement process. This new policy strategy was introduced to replace government departments' obsolete practices (Selomo and Govender, 2016).

2.7 DIFFICULTIES IN MANAGING AND CONTROLLING PUBLIC SECTOR SUPPLY CHAIN

There are a number of challenges in managing and controlling public sector SCM (Essig and Dorobek, 2006). Challenges such as tensions between citizens, customer requirements, pricing

factors and the complexity of multidimensional processes of supply chain are factors that affect the supply chain and underlie the need to control it (Jehle, Stüllenberg and Schulze 2002).

2.7.1 TENSION BETWEEN CITIZEN AND CUSTOMER DEMAND

The need to control the supply chain in the public sector results from the different requirements of citizen for public goods, and the willingness of certain individuals to pay for those goods and services. The interests of citizens contradict one another – some are trade-offs as opposed to others. In the public sector, the need to control is derived from the complex relationship between citizens' general demand for public goods and the individual citizen's willingness to pay for the provision of goods. Citizens have multiple divergent interests, some of which are trade-offs against others. The citizens' demands are high due to the belief that they pay tax and therefore they require economic utilization of public resources, and this creates the tension between citizens and the purpose of SCM (Essig et al, 2006).

2.7.2 PRICE PRESSURE IN THE SUPPLY CHAIN

Pressure to drop prices is one of the main challenges in public sector SCM. The dropping of prices is written from the legal prescripts of supply chain to promote economic utilization of resources by looking at the value for money (Jehle et al, 2002).

2.7.3 COMPLEXITY OF MULTIDIMENSIONAL SUPPLY CHAINS PUBLIC SECTOR SCM

The public sector SCM is defied by the level of political governance and public administration. This complexity contributes to the existing problems of coordination with networks in private enterprises that correspond to private sector. Shortfalls in strategic understanding at the level of political governance may produce unintentional outcomes in the administration of SC (Essig et al., 2006).

2.8 INTERNATIONAL PUBLIC SECTOR SUPPLY CHAIN MANAGEMENT

SCM functions have not been acknowledged in developing countries, especially in the public sector despite the efforts from public partners such as international trade organizations, the World Bank, United Nations conferences, and others. This could be considered ignorance of the importance of SCM functions. The failure to give attention to SCM functions has been seen as the cause of irregular expenditure (Kakwezi and Nyeko, 2019).

In the EU, public procurement is restricted by specific legislation that enforces innovation, transparency, and sustainability (Glas et al., 2017). However, developing countries have transformed their public procurement regulations. The transformation has not focused only on the regulation but also on the procurements process, methods, structure, and SC employees. Nevertheless, most of the developing countries are facing challenges to meet SC requirements. The changes of SC systems affect all internal and external processes to achieve its objectives (Kakwezi et al., 2019).

Article 9(1) of the United Nations Convention against Corruption (UNCAC) is regarded as part of any government function. Article 9(1) specifically focuses on the volume of funds allocated to government procurement and the negative impact of fraud and corruption in public procurement. Moreover, other international organizations, including the United Nations Office on Drugs and Crime (UNODC), promote effective and appropriate public procurement systems (Mazibuko and Fourie, 2017).

Public procurement has a contribution to the economy. Over the last century, the public procurement has been forced to support procurement connections as a way of promoting public rights and including minority groups. This has been adopted as a trend up until now. Additionally, its primary goals – securing suppliers and services – are associated with horizontal policies.

In a gradually “networked society” in the twenty-first century, the procurement process comprises several institutional and individual actors. Even though public and private procurement are implemented differently, both start by procurement needs, the demand-supplier relationship. International public sector procurement is divided into six stages: specification, vendor nomination, contracting, ordering, expediting, and evaluation. However, practically, the six phases can become distorted or given different names. The UK describes their procurement cycle as project scope and contract preparation, contract letting, contract management, and contract review. Procurement and purchasing are identical but refer to the same functions. However, in essence, procurement is used in the public sector, and purchasing in the private sector (Thai, 2017).

2.9 STRATEGIC FORMULATION OF SUPPLY CHAIN MANAGEMENT IN A PUBLIC SECTOR

Procurement effectiveness, efficiency, and compliance in the public sector have become a concern. All public administrations recognize that public procurement needs proper regulations and analytical systems to be implemented (Patrucco et al., 2016).

Patrucco et al. (2016) further state that government departments currently fulfil their mission while relying on the relevant expenditures and supply chain functions that are managed appropriately. The government supply chain accounts for a large amount of taxpayer's money. Therefore, it is paramount to conduct supply chain functions in a transparent and well-organized manner while being accountable for each step of the process to protect the public interest.

It is anticipated that the public benefits through the procurement of goods and services from private suppliers. Both public and private suppliers have an interest in SC. Moreover, the government supply chain is used to address social issues such as creating jobs, promoting fair labor practices in the work environment, and ensuring a balance between the minority and people of color (Ambe, 2016d).

Procurement systems are formulated to balance the inequalities of the past. This is done by identifying opportunities and implementing tender qualification criteria for the tender transactions that impede participants of disadvantaged SMMEs (Flynn and Davis, 2017).

2.10 IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT PROCESSES IN A PUBLIC SECTOR

It is pointless to have SCM plans and strategies without proper implementation. Specifically, the organizational and information systems are important. Organizational issues are at the heart of the overall structure, individual responsibilities, and quantity systems required integrating procurement processes. Information systems are part of the implementation process to smooth SCM processes; therefore, systems must be designed to support SCM strategies (Acharya, 2016).

There is substantial evidence that SCM's effective and efficient implementation can improve organizational performance (Sweeney et al., 2015). For example, on the basis of a study conducted by Matolong (2015), Mazibuko (2018) concluded that a higher level of SCM and proper implementation of SCM practices could improve the performance of an organization and the

organization could achieve a competitive advantage. Deka (2016) contends that the proper implementation of SCM principles is crucial because it reduces costs increases revenue and improves the effective use of assets and service delivery. Furthermore, when supply chain principles are appropriately executed, they can eliminate problems currently faced by the departments; and not just one department, but also South Africa. For example, to mention a few countries, Canada, the United States, and the United Kingdom are more effective and efficient.

Many authors have raised critical questions about the impact of the practice of SCM (Cousins Paul et al., 2006), cited by Sweeney et al. (2015). SCM still suffers from the problem of being ignored; nonetheless, departmental SCM practitioners feel they can impact SCM. However, organizations do not consider that SCM practitioners must do their duties as required by policies, legislation, and rules and regulations. This is possible when they get the necessary skills to understand the entire SCM process: market mechanisms, contractual commitments and the level of agreements, completion requirements, possible consents and the importance of bidding documentation; this can stop the temptation of fraud between suppliers and practitioners (Okojie, 2017).

Matolong (2015) contends that SCM, chiefly in government departments, has not gained respectable publicity due to incompetency of the SCM officials. Specifically, Matolong (2015) mentions calculating preference points, lack of precise and clear motivation when there is deviation from SCM prescripts, the unethical situation of SCM officials' involvement with service providers who overvalue tenders and also supply substandard goods and services, and lack of political leadership to support compliance. Further, government officials do business with the government, which is not allowed according to SCM government policies.

2.11 PROCESSES OF SUPPLY CHAIN MANAGEMENT IN THE PUBLIC SECTOR

In the past, public sector procurement used state tender boards. However, state tender boards are no longer the only way of advertising. Public sector institutions have implemented the procurement framework circulated by the government. The framework's emphasis is on the implementation of SCM requirements. The requirements entail different stages, such as demand, acquisition, logistics, disposal, risk, and performance management (Ambe and Badenhorst-Weiss, 2011). The goal of integrated SCM is to supplement value to each phase of the processes. Firstly, there is demand management, where the need for goods and services is identified along with the process of acquiring them. This is followed by managing the process of getting these goods to the right

place at the right time (logistics), and finally, after the lifespan, there is disposal. Concurrently, there is identification of any risk factors around the process and assessment of how SCM is performing. By following the right way, deficiencies are identified in procurement management, assets, and disposal (Ngxesha, 2015).

The SC processes are designed to ensure proper implementation of SCM principles, such as value for money, competent and open competition, ethics and fair dealing, equity and accountability, and reporting. The principles are in place to standardize the procurement process, promote good governance, and develop industrial standards (Ambe, 2016a).

The following framework is taken from the Generic Elements of SCM by the National Treasury (2015) to demonstrate the logic in SCM elements in the public sector and reflect on how regulations, systems, and legislation support them (Ngxesha, 2015).

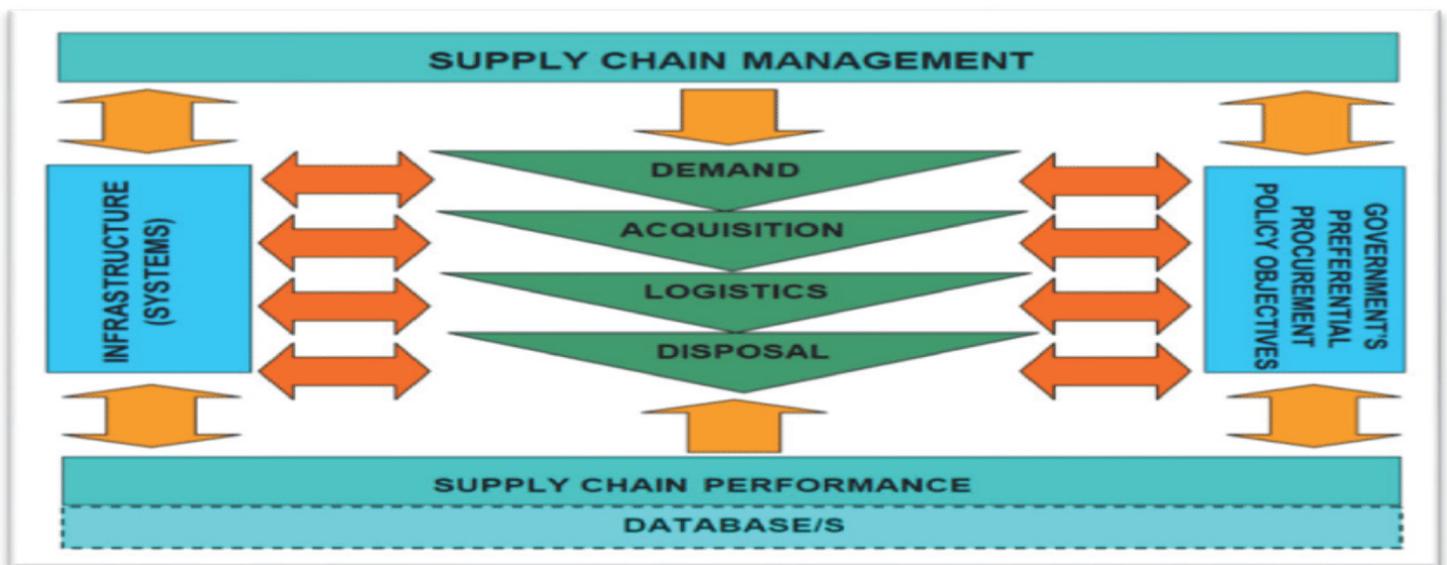


Figure 1: Generic Elements of Supply Chain Management. Source: National Treasury 2015

2.11.1 DEMAND MANAGEMENT

Demand management is the initial stage where the department identifies the need before requesting to procure goods or services. The first step of the process is to identify the need, and the next step is to identify if these goods and services are outlined in the procurement plan. There is an available budget. If not, there is an alternative way of getting funds, such as the movement of funds from other goods or services. The next step checks if the need exists before analyzing how the proposal will be solicited and estimating the budget. Then the acquisition process and the method are

determined by the cost price from previous purchases (Deka, 2016). Demand management involves drafting procurement plans, that is, identifying what products or services will be purchased in the financial year and how much money is budgeted for each item.

The sourcing method is also selected at demand, and the government recently introduced the new mechanism called E-tender. E-tender is similar to the state tender bulletin; the difference is that it has a threshold R 500 000.00 and less than R 200.00 (Monczka et al., 2015).

Demand management keeps up to date with the current market into:

- Selecting competitive suppliers,
- Identifying new potential suppliers and develop a good relationship,
- Encouraging improvement in existing suppliers and those suppliers that are not competitive.

This is the process of selecting the right suppliers that have the potential to deliver what the department requires to achieve its goals. Demand management defines potential suppliers as suitable suppliers to fulfill the technical and non-technical specifications and deliver the service or product at the right time and place (Witjes and Lozano, 2016). Kiiver and Kodym (2015), (Bizana et al., 2015b; Monczka et al., 2015) state that demand management is responsible for market research (price) of a product or service, to inform the end-users about the price probability.

At this stage, the need is acknowledged, and procurement of the necessary resources is analyzed and planned according to the procurement plan. This precedes SCM implementation and is applied to ensure products and services are delivered as per identified need (Mokotedi, 2016). Demand management receives the application for purchase on a form of requisition (Witjes and Lozano, 2016).

According to Ngxsha (2015), demand management is the planning, predicting and replacement of goods. Improving planning in the supply chain results in sales increases and improved customer service.

2.11.2 ACQUISITION MANAGEMENT

Acquisition management is the process of purchasing goods and services (Bizana et al., 2015). Deka (2016) citing the Treasury (2003a) states that acquisition management involves:

- The processes of acquiring goods and services by government entities; systems of attaining a total value of assets.
- Systems to ensure proper documentation.
- The process of ensuring that bids are evaluated according to stated evaluation criteria.
- Decisions on awards; these are made by relevant parties and are signed according to the prescripts.

Acquisition management is the second stage of the Supply Chain Management Procurement Framework (in the future SCMPF), whereby the department decides on the market approaches (Ngxesha, 2015).

Public procurement by any organ of the state (national, provincial, local, and government departments) is governed by legislation (Munzhedzi, 2016). Section 100 of the *Preferential Procurement Policy Framework Act, 2000 (Act 5 of 2000)*, states that this is the starting point of procuring goods and services. Methods of procurement are decided by demand; therefore, this stage of the process is about putting procurement into practice. Quotations are sourced verbally, by emails, e-tender, and state tender bulletins. Departments are using tender bulletins for advertising those goods and services above R 500 000.00.

The government department (National Treasury) recently introduced a new advertising mechanism for products that seem complicated in terms of getting quotes from selected suppliers (Monczka et al. (2015). However, the mechanism is similar to state tender bulletins; the difference is that it is also used for less than R 500 000.00 and less than R 2000 000 (Kramer, 2016). Kramer (2016) and Munzhedzi (2016) state that the some of the reason for the e-tender portal establishment was to support the pillars of SCM, such as fairness, transparency, competitiveness and cost-effective procurement; it is accessible, like a one-stop-shop, and uses an advance technology system to procure. According to Ngobeni (2016), ways of achieving the pillars are to have standard procedures of opening a tender box (box to drop off the tender before the closing date) to avoid any influence over the bid received; the tender box must be opened in public, and critical information should be registered and disclosed.

Section 217(3) of the Constitution considers and puts emphasis on the previously disadvantaged SMMEs by saying that must be competitive. Demand management receives an application for

purchase on a form of requisition. The tender bulletin is used for advertising those goods and services above R 500 000.00.

According to Maleka (2016), acquisition management includes evaluating bids, bid committee compilation of default registers, procurement systems, the overall value of assets, bid adjudication, and the appointment of experts. The following committees govern this process of advertising.

2.11.2.1 BID SPECIFICATION COMMITTEE

This committee comprises different people from different directorates, including Accounting Officers, end-users, SCM members, and experts in the field of the specification (Bizana et al., 2015b). (Maleka, 2016) states that in the sophisticated bids, departments may include outside specialists. According to Section 4.1(a), implementation of SCM, the bid specification needs to be approved by the Accounting Officer before it is advertised. The process of implementing the bids is also monitored by the Chief Financial Officer (in the future CFO). The committee should focus more on specifying and describing the performance terms rather than outlining design characteristics. Moreover, (Matemotsa, 2017) states that this committee is responsible for drafting specifications, and stipulating how the proposal will be evaluated and the type of contract as per the PPPFA.

2.11.2.2 BID EVALUATION COMMITTEE

This also involves different members, which include supply chain officials and the end-users requester (Maleka, 2016). They are responsible for evaluating received proposals, doing pre-compliance checks in terms of the PPPFA and Constitution, and form part of acquisition management (Bizana et al., 2015b).

The evaluation process should be in line with the specification and the criteria as stated in the advert. Therefore, when the committee evaluates, it checks the ability, the nature and quality of resources that are going to be used by the company, and its reliability. Looking at resources does mean the evaluating company looks at the material and financial resources (does the company have funds available or sponsors?), human resources (do the people who are going to be involved in the contract have enough and relevant experience?), and company experience as a whole (Kiiver and Kodym, 2015). Okello (2018), supporting Kiiver and Kodym (2015), states that the committee

should focus on suitability for the contract, compliance with requirements, and the capability to perform contract objectives.

However, Bolton (2009) states that it is not easy to measure or define the company's ability, and no regulation or policy has come out with the best definition. The bid evaluation committee usually uses this term "ability" in relation to meet deadlines and delivering to the right place and at the right time, with the reference to previous experience. The price is then considered.

The committee should evaluate bids received and compile a report stating the recommended bidder, and forward that to bid adjudication committees for final appointment (Maleka, 2016).

2.11.2.3 BID ADJUDICATION COMMITTEE

This also consists of four general managers from different directorates and SCM representatives of compliance surety. Through the suppliers selected by the BAC, the committee thinks and makes recommendations based on the relevant legislation (Bizana et al., 2015b). The BAC uses a comparative cost program divided into two parts, namely, price value and the B-BBEE formula, as provided by the Broad-Based Black Economic Empowerment Act, to award the relevant suppliers. The processes are undertaken by the BAC regulated by the PPPFA, BBBEEA, and the PFMA (Mokotedi, 2016). However, Ambe (2016a) contends that every government department considers bids based on the market approaches, including the total cost of ownership by the department. They ensure that bid documents are duly complete, and all documents are signed.

However, this depends on the department delegations; other departments' final decision is taken by the Department Manager or Accounting Officer (Matemotsa, 2017). Therefore, the supplier obtaining the highest points during the evaluation process is recommended for the tender award; in a situation where two contractors scored the same points, and are the same in terms of functionality, drawing of lots is used to award the tender (Kiiver and Kodym, 2015).

According to Matemotsa (2017), Section 217 of the Constitution states the delegation of powers and functions of the tender board committee. The section outlines that a state entity of any three spheres of government, according to the law, may have an agreement to deliver goods and services on behalf of the government. However, the process must be done in a manner that is equitable, transparent, opens up competition and is cost-effective. These requirements align with Section 33

of the Constitution on administrative justice and Section 195(1), which is the principle of governing public administration.

The Province of KwaZulu-Natal department of Economic Development (2018) states that Preferential Procurement Regulation, 2011, supports the Preferential Procurement Policy Framework Act, No 5 of 2000, which states that cancellation of bids leads to re-invitation. This might occur where all proposals submitted are less than R 1000 000, the department no longer needs the services, there is unavailability of funds, and there are no proposals recommended by the bid adjudication committee. This might also be caused by different issues such as unclear specifications, and contract conditions do not correspond with the service needed (Province of KwaZulu-Natal department of Economic Development 2018).

2.11.3 LOGISTICS MANAGEMENT

Logistics is the process of controlling procurement, driving, conserving resources within an organization, and creating network marketing strategies to maximize profit (Mokotedi, 2016). Logistics is part of the supply chain that plans, executes, monitors, and controls the effective and efficient course and the space of goods, services and information from the original point to the point of utilization to satisfy customers' needs (Bizana et al., 2015). According to (Mokotedi, 2016), logistics is the management of procurement, and the movement and proper utilization of resources inside the department.

Moreover, other department use “reversed logistics” as the process of planning, execution, and monitoring and controlling the efficient and effective flow of input, inventory, output and the related information from the place of utilization to the place of manufacturing (Badenhorst, 2017).

Logistics deals with transportation, issuing orders, and the smooth flow of information at different points (Christopher, 2016). In assets and logistics, fixed capital items are categorized appropriately, and assets are registered, including the valuation. The finance department intervenes to make payments (Treasury, 2003b).

2.11.4 DISPOSAL MANAGEMENT

Disposal management is the management of used assets that are redundant, obsolete, and unserviceable. This requires the creation of records to separate assets that need to be disposed of

and assets to be maintained, and to determine the methods and the way to execute the process (Maleka, 2016).

This involves planning the removal of assets that are no longer needed by the department. However, these assets may be required by other governments. In the disposal process, disposal committees are appointed to identify assets that can be serviced, and to manage the process to see if proper procedures are followed. The right strategy and methods are followed (Ngxesha, 2015). Ngobeni (2016) notes that according to Accounting Officer guidelines of the National Treasury's SCM, disposal is the end stage where the department needs to get rid of redundant and unserviceable assets. Ambe (2016a) As Ambe (2016a) states, this includes planning the disposal of obsolete databases, considering redundant assets, examining assets for maintenance, and considering disposal strategies and execution methods. The purpose of disposal is to get rid of assets that are no longer used (Baloyi, 2013). Bizana et al. (2015a) define disposal management as the process of disposing of assets that are not needed, unserviceable, and obsolete.

Disposal planning includes the sale of redundant assets at a reasonable value, updating the redundant assets database, and re-viewing actual assets that need to be disposed to check if there are no assets that can be repaired. If not, the disposal strategy and the execution of the physical disposal is commenced (Tshilo and Van Niekerk, 2016).

It is a disposition of government assets such as rational possessions rights and helpfulness to acquire goods and dispose of assets through making sales, rental, franchising, and auctions. Mensah (2014) states, that there is no dogmatic definition of disposal commodities and gear, but for the study he conducted, goods were assets such as resources, products, gear, and others in the form of solids, liquids, and gases. Also, in the process of disposing, the department has to check the disposal strategy. Some sell assets to the recycling company, some make donations (Bizana et al., 2015a).

2.11.5 RISK MANAGEMENT

Risk is when unfavorable situations may attack a department's supply chain by changing the activities such that they are perceived differently by different stakeholders such as suppliers and managers from different directorates. Risk management is described as identifying, monitoring, assessing and putting measures in place to achieve goals (Matolong, 2015).

Risk management is a series of events that involves categorizing, seeing, and avoiding risks, and cover enduring risks (Maleka, 2016). It includes predicting the risk that might occur to the SC process and devising contingency plans to deal with the risk when it occurs. Avoiding and mitigating risk is not easy. Some authors oppose providing solutions to risk; they rather consider avoiding it in the first place by providing adequate residual risk measures (Mokotedi, 2016). Dzuke and Naude (2015) state that risk management is essential to prevent the future occurrence of events, activities or factors that may otherwise incur risk.

According to Ngxesha (2015), risk management is essential; it provides assurance and builds trust with different department stakeholders. Compliance with relevant policies and procedures can help minimize the levels of risk the department is vulnerable too. Furthermore, the department develops different risk assessment programs to:

- Categorize types of risks.
- Predict the probability of significant disruption that can be caused by the risk.
- Evaluate possible loss due to disruption and identify mitigation strategies.

Ngxesha (2015) estimates that risk management and governance is an essential part of corporate governance. Furthermore, Ngxesha (2015) recommends the King Report III to establish risk management policy and execution plans, to be signed by all directors in the board. Christopher (2016) suggests that risk management can be done by applying the following three elements:

Visibility: looking at the flow of goods and services through SCM.

Scenario analysis: testing strategies, looking at the cost.

Rapid response: devising strategies to deal with unexpected and unplanned events.

2.11.6 PERFORMANCE MANAGEMENT

This is the last element whereby, after the planning and execution have been done, this step is taken to see if processes were implemented correctly, and goals achieved. Moreover, this step is to identify whether proper regulations and policies were used along the process (Bizana et al., 2015a). The supply chain for the government department is monitored and evaluated by the National Treasury. Therefore, the National Treasury template is used to measure the level of performance. However, most departments do pre-performance checks and internal audits (Mokotedi, 2016). Performance management is an overseeing process whereby a retrospective

action analysis is performed, and conventional processes are followed to achieve the desired objectives.

Supply chain risk harms the entire performance; nonetheless, these risks can be managed when they affect SC performance (Ngxesha, 2015). Performance management also includes contract management. Performance management and supplier assessment are also crucial for maintaining supplier relationships (Mokotedi, 2016). The study scrutinizes each of the above elements to see how the department operates and how the planning, application, monitoring, and evaluation are applied.

2.12 SCM POLICIES AND REGULATIONS EMPLOYED IN THE PUBLIC SECTOR

This section describes the regulations that govern the procurement of goods and services in South Africa. Before establishing the Public Financial Management Act of 1999 (PFMA), Financial Management Act of 2006 (FMA) operated in the absence of the PFMA. All other regulations were appropriate for decisions related to procurement (Okojie, 2017).

Supply chain management operates on the regulatory frameworks set by national government and extends to provincial and local government to implement in terms of the policies and legislation. Political leaders are very dependent on the legislation to make informed and intellectual decisions. The legislative frameworks insist that each government department implements SCM policies, as stated by the PFMA (Ngobeni, 2016).

The regulation of procurement practices is vitally important considering the role it plays in the country's economics. The legislation aims to influence the relationship between SCM stakeholders, ensures fairness and transparency in suppliers' appointments, and monitors goods and service delivery by suppliers. The SCM concept was introduced to bring consistency and uniformity in implementing procurement policy, and promote accountability to all parties (Ngcamphalala and Ambe, 2016).

2.12.1 CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA (1996)

The Constitution of the Republic of South Africa is the supreme law. It is also the bedrock for compliance procurement and the yardstick to measure service delivery. Section 195(1) of the Republic of SA's Constitution stipulates democratic values and the central principles of public administration (Zitha et al., 2016).

Section 217(1) of the Constitution provides the basis for procurement, to ensure that goods and services are purchased according to fair, equitable, transparent, competitive, and cost-effective systems. The main focus of the constitutional objectives is to attain value of money, ensure integrity in dealing with taxpayers' money, hold government procurement accountable to the public, and ensure competency in the implementation of procurement (Maleka, 2016). According to Mazibuko (2018), Section 217 provides power for the state to practice procurement for empowerment purposes. Any organ of the state is given the power to use preference in awarding tenders, to protect previously disadvantaged individuals. However, Mazibuko (2018) further states that despite the principles stated by Constitution in Section 217(1), many regulations exist. These regulations emphasize specific aspects of procurement without reference to the legislation that guides public procurement.

2.12.2 PUBLIC FINANCE MANAGEMENT ACT (PFMA) (ACT 1 OF 1999) AND TREASURY REGULATIONS 2005, GAZETTE NO. 27388 DATED 15 MARCH 2005

The PFMA is a universal statute governing procurement in the public sector. The main objective of this Act is to secure transparency and accountability, and manage the revenue, expenditure, assets, and liabilities according to the Act. This Act applies to public entities listed in Schedule 2 or 3 of the provincial legislatures. It is a financial management approach that focuses on value for money and returns on investments (ROI) (Matemotsa, 2018).

Munzhedzi (2016), citing Ambe and Badenhorst-Weiss (2012), states that an Accounting Officer's responsibility is to prevent unauthorized, irregular, fruitless, and wasteful expenditure and institutional losses resulting from corruption. Tshilo and Van Niekerk (2016) assert that PFMA gives substance to Section 2017(3) of the Constitution by offering a framework that governs the implementation of PPPA.

Munzhedzi (2016) further states, "Section 38 of the PFMA, 1999 also states that the PFMA also instructs the Accounting Officer to implement an appropriate procurement and provisioning system which is fair, equitable, transparent, competitive and cost effective". Section 76(4)(c) of the Constitution authorizes the National Treasury to issue instructions to the public sectors to which this applies to determine the framework of appropriate procurement and provision of fair, equitable, transparent, competitive, and cost-effective procurement. However, these regulations must be in line with the National Treasury. Moreover, this requirement must be understood with

the Constitution's principles that promote justice in administration, as indicated in Section 33 and Section 195(1) that state values governing public sector administration (Matemotsa, 2017).

Dlomo (2017) states that Treasury regulations increase the level of expenditure controls and public financial management (PFM). Moreover, these regulations are used by public sectors and entities, and constitutional institutions to make compliance compulsory while addressing operational issues in public finance management.

Matemotsa (2017) further states that Treasury Regulation 39 establishes a comprehensive framework of the must-dos in the supply chain.

Treasury regulations include threshold values, procurement methods to be adopted, SCM official's employment requirements, and ethical standards to be followed (Mokotedi, 2016).

2.12.3 PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT 5 OF 2000 (PPPFA)

The adoption of uniformity in procurement created an excellent approach to implementing SCM systems in the government department. This adoption was created to make SCM meet the standards of the PFMA. This is stated in Section 76(4): The National Treasury is responsible for making this applicable to all departments to determine the procurements systems are fair, equitable, transparent, competitive, and cost-effective.

The National Treasury issued regulations that state strategic and general parameters to create accountability. For example, the Accounting Officer is responsible for overlooking the issues of accountability, and ensuring procurement is organized, transparent, cost-effective, efficient, and competitive (Okojie, 2017).

Section 2(1) of the PPPFA states that government departments must implement the policy as prescribed by the framework. It states that the bid evaluation process must be done using preference points as outlined in the invitation to bid. Moreover, Section 2(1) states that tenders from the rand value of R 1.00 up to R 500 000 are calculated using the 80/20 system. Tenders less than R 500 000 are calculated using the 90/10 system, while historically disadvantaged individuals (HDI) are calculated by 20 or 10, to achieve departmental needs while promoting BBBEE (Ngobeni, 2016).

Fourie (2015) asserts that the intention of PPPFA was to address imbalances and is a tool used in developing countries and developed countries. Fourie (2015) further asserts that PPPFA is also a

pivotal mechanism in the South African public sector to achieve the secondary economic objectives of connecting the gap between the first economy and the second economy created by apartheid regimes.

2.12.4 BROAD-BASED BLACK ECONOMIC EMPOWERMENT ACT 53 OF 2003

Broad-based Black Economic Empowerment is defined as a cohesive and comprehensive socio-economic process that positively impacts the South African economy by increasing black-owned companies and black people in management, and by creating a balanced economy where everyone has a livable income (Ambe, 2016a).

The Broad-Based Black Economic Empowerment Act 53 of 2003 (BBBEEA) aims to enable BEE. It aims to transform the economy to ensure that black people add value to the economy. The Act promotes black-owned enterprises and advocates for managerial positions to be occupied by black people in these enterprises. It promotes the involvement of workers in decision making and in community organizations and promotes the increase of women in economic activities. BBBEE is achieved by giving blacks access to finance (Ngobeni, 2016).

This is practically applied using a scoring formula. The evaluation system formed by BBBEEA is used to calculate BBBEE points of the supplier and price points, but it depends on the nature of the contract. All suppliers may be given 100; this is done to get competitive priced goods and services, and the lowest quote scores the highest points (Dube et al., 2015).

2.12.5 PREVENTION AND COMBATING OF CORRUPT ACTIVITIES ACT 12 OF 2004

This Act takes corruption and fraud as an offense. It was adopted to place limitations and restrictions on special powers and condemned corrupt activities relating to the awarding of tenders. Moreover, it places a duty on certain individuals with specific power to report fraud and corruption (Maleka, 2016).

Prevention and Combating of Corrupt Activities requires any individuals to report corruption, fraud, and theft of financial resources to police commissioners. The failure to report this kind of corruption can be a prime incrimination of that official. This Act is useful where there is something suspicious or irregular in the employment process of personnel. However, in the case where individuals' employment is compromised by nepotism, corruption is indirect to public finances, therefore it is not correctly reported (Ngobeni, 2016).

This Act addresses unacceptable conduct such as private interest in acquiring contracts and investment in private bodies. Moreover, the Act seeks to endorse fairness and reduce conflict of interest by officials involved in SCM administration (Matolong, 2015) .

2.12 CONCLUSION

In this chapter, SCM and SC were defined to differentiate the two and show their relationship. Although it was indicated that there is no single definition for SCM, some definitions of different authors were discussed and provide an overview of the concepts. SCM and SC's main aims and objectives were outlined to indicate the impact of SCM on the department and its stakeholders. Supply chain management is not only a South African practice, but it is also practiced internationally. Therefore, a brief overview of public sector SCM internationally was discussed. Strategic formulation and implementation of SCM were discussed. The framework emphasis is based on the implementation of SCM requirements. The requirements entail different stages, such as demand, acquisition, logistics, disposal, risk, and performance management (Ambe and Badenhorst-Weiss, 2011). Lastly, it was noted that SCM has been established, however, political leaders require legislation to make informed and intelligent decisions. Legislative frameworks were introduced to promote consistency and uniformity; therefore, SCM processes must be implemented according to legislative policies and frameworks. This chapter discussed these legal frameworks that regulate public sector SCM. The next chapter introduces the Department of Economic Development, Tourism, and Environmental Affairs (EDTEA) that is the focus of the study.

CHAPTER THREE

THE DEPARTMENT OF ECONOMIC DEVELOPMENT, TOURISM, AND ENVIRONMENTAL AFFAIRS (EDTEA) OVERVIEW

3.1 INTRODUCTION

This chapter provides a brief overview of the Department of Economic Development, Tourism, and Environmental Affairs (EDTEA), including the location, the department's role, and its strategic goals.

3.2 THE DEPARTMENT OF ECONOMIC DEVELOPMENT, TOURISM AND ENVIRONMENTAL AFFAIRS (EDTEA)

The head office of the Department of EDTEA is located in KwaZulu-Natal's capital city at 270 Jabu Ndlovu Street in Pietermaritzburg in the uMgungundlovu District Municipality.

South Africa has faced socio-economic challenges, accompanied by the slow economic growth and inventive and influential approaches to economic development. The Department of EDTEA strengthens its policy on economic growth. The department has identified important strategic pillars to improve KwaZulu-Natal's (KZN) economic development to achieve economic growth. These pillars' main aim is to increase economic activity and create job opportunities for black people to redress the unfairness and poverty in KZN communities, especially rural areas and townships (Edtea, 2017).

KZN Department of EDTEA is charged with supervising provincial socio-economic transformation. Therefore, the department guides the policy and strategic initiatives engaged with development and growth in different economic divisions. To accomplish its objectives, EDTEA works with different stakeholders such as social partners and civil society. The operations of the department are guided by national and provincial legislative policy and strategic frameworks. The Constitution of the Republic of South Africa, particularly Schedule (6), states the provincial government's position regarding economic development competence.

The department's long term goals are to lead in the planning, design, and implementation of ways to achieve economic growth; overall economic growth creates jobs opportunities, provides seeds

for transformation through excellent performance (Edtea, 2017). The department has developed policies and legislation to direct the vision and mandate of the department. In the next upcoming years, the department plans to achieve the effective execution of its developed policies and strategies. The challenges of the department can be met by effective implementation of the policies and strategies. For the department to execute the policies and strategies in a cost-effective way, it must use different programs to create functions related to the department's strategic mandate. These functions include being actively involved in the implementation strategy, providing corporate support services to promote compliance, and organizing resources for service delivery.

Act No.1 of 1999, as amended by Act No.29 of 1999 (Public Finance Management Act in the future PFMA), which was established after the Constitution, is the most crucial legislation established by the democratic regime of South Africa (Jayalath, 2016). This Act promotes good financial management outcomes to maximize service delivery while utilizing limited resources of the Department of EDTEA.

EDTEA is a public sector that promotes access to information. This means members of the public are provided with information if they wish to know about the department. However, a particular procedure needs to be followed when looking for specific information. Also, communication with the respective directorate is not prohibited. However, the department recommends that confidential information and the most highly strategic formal request for the head of departments should be made (Edtea, 2017).

The KZN EDTEA is a top department promoting women's economic empowerment and advocate for liberation in KZN province.

One of the members of the Executive Council on Economic Development in the South African Provincial Legislature quoted from the late president of Mozambique, comrade President Samora Machel:

The liberation of women is the fundamental necessity for the revolution, a guarantee of its continuity and a condition for its success. South African women had proven President Samora's statement in history when they walked to the Union Building to fight for a non-racial, non-sexist, democratic, and wealthy country.

The department has developed a database of women involved in the construction and mining industry. It is also working with several industries such as clothing construction and textiles, mining, strategy development, and auctioning, to include women. Furthermore, it is committed to support SMMEs, and Co-operatives owned by women with funding, supplemented by training, and relevant information.



Figure 2. Source: (South Africa maps, 2018) (<https://www.sa-venues.com>)

3.3 VISION

The first time the planet could be seen from space was in the middle of the twentieth century. Eventually, history specialists discovered that this vision has had more influence than when, in the sixteenth century, it was revealed that the earth is not the middle of the universe, a discovery that

disappointed humanities' self-image. From space, we see a small brittle ball controlled by human activities and organization (Göpel 2016).

According to Prof. Dr. Uwe Schneiderian in Göpel (2016), the 21st century is the season of radical change. It is a presentation of challenges of new dimensions, scope, and scale.

According to the EDTEA executive for the 2015-2020 political terms, the South African government embraced a radical economic transformation approach. This approach is more dynamic and brings new change to unlock economic opportunities, and to bridge the gaps between the social groups, gender, social class, and people with disabilities (Edtea, 2017).

The EDTEA's vision is to attain radically transformed, inclusive, and sustainable economic growth for KwaZulu-Natal.

3.4 MISSION

Mission statements articulate the long-term intent of the organization and are expressed to internal and external stakeholders. They indicate the goals of an organization and define the purpose of the organization. The mission statement also describes statements that differentiate one department from another department (Fitzgerald and Cunningham, 2016).

According to the Edtea (2017), the mission of the department is to:

- Provide responsible leadership and monitor economic planning.
- Be a catalyst for economic transformation.
- Promote economic growth and environmental management through strategic implementation.
- Attract tourists through trade and investment.
- Monitor the implementation of consumer regulations.

The vision is achieved through pursuing the following measurable values that are aligned to the departmental legislative framework.

3.5 VALUES

The department is committed to providing a conducive atmosphere to accommodate its employees. It demonstrates belief in its employee by promoting a culture of Ubuntu (Göpel, 2016). Values it espouses are as follows:

- A supportive and caring environment

- Fairness and integrity
- Transparency and accountability
- Ethics and fair dealing

These are government's objectives in establishing the South African public sector SCM framework, and are used to create uniformity on procurement practice, thereby enhancing economic transformation through the principles of governance (Matolong, 2015).

3.6 SUPPLY CHAIN MANAGEMENT

The department pays its suppliers within 30 days. According to the financial year 2017/2018, it managed to pay 93% suppliers within a 30-day period. This may have a positive impact on SMMEs in creating an opportunity to bid. It also improves internal control and accountability and curbs irregular expenditure.

According to Jayalath (2016), commenting on one study conducted, it is crucial to conduct a sensitive and on-time assessment of SCM performance and the process of payments to review, implement, and fast-track payments in order to meet the indicated time-frame. This is done by monitoring the process as well as financial management and closing any gaps in the payment process. These measures would contribute to departmental efficacy and minimize any complaints of late payment for service providers.

This has been a battle with South African government departments, including EDTEA, as well as in many countries in the European Union. The United Kingdom was the first to implement payment legislation to promote the culture of a swift payment process. However, the payment legislation was not enough, and was followed by an amendment on 16 March 2013 to enforce late payment for commercial transactions. That aimed to simplify the payment process and combat the habit of paying late, as it promotes a norm of paying on time. Moreover, the UK government department promised to pay more than 70% of finalized invoices in five days (Jayalath, 2016).

3.7 STRATEGIC OBJECTIVES

The department has different programs and sub-pre-programs. The Head of the Department office is responsible for providing departmental strategic leadership, managing risk, conducting strategic planning, and providing effective administration of the department's programs.

3.8 FINANCIAL MANAGEMENT

The sub-program ensures that financial regulation and policies are implemented effectively. The financial management division and the chief financial officer are responsible for managing the budget, acquisition, expenditure, and keeping records of financial transactions.

3.9 CONCLUSION

This chapter presents an overview of the department where the study was conducted, including the department's location, vision, mission, and what the department does to achieve its vision (values). The department is committed to empowering women and previously disadvantaged individuals to achieve those programs and policies that have been developed. Recognizing that South Africa is faced with socio-economic challenges and slow-moving economic growth, the department strengthened its policies and implemented more strategic initiative to supervise socio-economic challenges at the provincial level. The following chapter presents the research design and methodology.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

This chapter provides the research design and methods used in this study. The research methodology is the road map of how the research process is planned and implemented (Maleka, 2016). This chapter describes how the researcher used the research designs and methods to achieve the stated aims and objectives of the research.

The main aim of conducting this study is to evaluate the SC processes at EDTEA. It seeks to understand SCM processes adopted by the department and how these processes are implemented.

Researchers are aware that there are several research methods to choose from, and it is crucial to understand the pros and cons of these various methods (Okojie, 2017). According to Ngobeni (2016), it is essential to identify the research methodology before the study commences to provide unquestionable and real results.

Research can be defined as the phenomena of using different techniques and the process of using systematic and formal techniques to achieve research objectives. However, the planning of the research design is vital to provide valid results (Mokotedi, 2016).

The research methodology chapter focuses on the research process, the types of tools and measures used, and the main objectives of the measures employed. This chapter formally introduces the research questions, data collection methods, and design of the study.

4.2 RESEARCH METHODOLOGY AND DESIGN

Methodology in research is defined as the theory of how the study was undertaken. It is crucial to have an understanding of methodology to make the right choice of methodology (Saunders, 2011).

The research methodology is vital to the research process. A research methodology is a structured and very organized way of coming up with a solution to a problem. Walliman (2017) further states that it is a road map of how the research will be conducted. Moreover, before the research is conducted, the researcher needs to know research techniques and methodology in research, the development of indices and experiments, and to calculate arithmetic sequences with the support of understanding their relevance to the research (Saunders, 2011, Creswell and Poth, 2017).

However, the methods are determined by the research purposes. After the researcher identifies the research problem, they select the methods to be used (Ngobeni, 2016).

Research methods are tools and systems for conducting research. Research is a term used freely to describe any exploration that aims to discover a researcher's interest. All activities are carried out to produce a high level of results (Walliman, 2017). Walliman (2017) further states that the research methods can be in a theoretical, experiment tests and statistic form. These methods help researchers to do sampling and find answers to a research problem.

The methods chosen for this study were influenced by existing literature on similar studies, the research problem, researcher exposure, and the study's participants.

4.3 RESEARCH APPROACHES

Three overall research methods are qualitative, quantitative, and mixed methods. However, the mixed method is hardly used in social research (Mokotedi, 2016). Despite that, all these approaches use the same route to reach their conclusions, but the qualitative approach focuses on pictures, diagrams, and text collected from interviews (Creswell and Creswell, 2017).

4.3.1 QUALITATIVE

Qualitative research is an analysis of text transcripts collected through interviews. According to Ngobeni (2016), qualitative research focuses on collecting and analyzing information to describe people and events rather than using statistical data.

Various data collection methods used in qualitative research include focus groups, interviews of a qualitative nature, disclosure analysis, conversation analysis, text analysis, and document analysis (Walliman, 2017). Rahi (2017), states that qualitative research is used to collect detailed data on a particular topic. This method assumes that an individual represents the group's feelings, and individuals' emotions are interpreted. In contrast, these are ignored by the quantitative method. Creswell states that this method is used when a researcher intends to observe the environment to develop theory.

According to McCusker and Gunaydin (2015), qualitative methods aim to develop an understanding of different people's attitudes and experiences. The methods used aim to formulate answers of what, how, and why of a phenomenon more than how much, or how many, answered in a statistical form.

4.3.2 QUANTITATIVE

Quantitative research is a method used for testing objectives by exploring the relationship between two variables. These variables can be measured on research instruments, so that numbered data can be statistically analyzed (Bhattacharjee, 2012). The quantitative approach is referred to as a scientific method. The main focus is on new data collection based on an identified research problem, looking at the large population other than recognizing the context of the environment, individual feeling, and emotions (Rahi, 2017).

According to Mokotedi (2016), this approach is concerned with providing specific findings, which are generalized. Moreover, it focuses on the relationship between variables.

4.3.3 MIXED METHODS

A mixed-method approach involves collecting qualitative and quantitative data, mixing two types of data that comprises philosophical assumptions and theoretical context.

Mixed methods is a research method whereby quantitative and qualitative data collected for the same study are combined and analyzed concurrently. This method appeals to the potential strengths of quantitative and qualitative data. It empowers the researcher to explore various viewpoints and uncover an existing relationship between the complicated layers of many-sided research questions (Shorten and Smith, 2017). This approach focuses on mixing various methods in the collection, analysis, and reporting of findings. The term 'mixed' clarifies itself as an integration of data in the research process. Integrating different approaches empowers the researcher to seek an extensive view of the research backdrop, viewing phenomena from different angles through diverse research eyes (Shorten and Smith, 2017). Shannon-Baker (2016) views it as a theoretically grounded method. Shannon-Baker also motivates the use of mixed methods to provide a sophisticated understanding of a phenomenon that would not be clearly understood using a single approach.

Shannon-Baker (2016) further states that the advantage of using mixed methods is that, it validates data and outcomes by using multiple data sources, and methods, it finds factors that encourage further studies, and broadens the study to integrate all aspects of every situation. For this study, the researcher chose mixed methods to undertake the study.

4.4 TARGET POPULATION AND SAMPLING

The population can be referred to as all the people or samples that one desires to understand (Rahi, 2017). The population and location of the study are 307 employees of the Pietermaritzburg EDTEA head office. The target population is 22 SCM employees divided into two groups comprising the management team (5 members) and other supply chain officials (17 officials). These are employees of the entire SCM directorate which includes: demand management, procurement management, logistics management, disposal and assets management, risk management, and performance management.

The target population was chosen to provide valid viewpoints and to ensure that data would be collected from respondents who are directly involved in the supply chain.

4.4.1 SAMPLING METHODS

Types of sampling methods include probability and non-probability sampling. Probability sampling is a sampling method in which every section of the sample is given an equal chance of being selected as a representative of a larger population. In this method, parts are selected from the whole group, not intentionally but by some mechanical process (Rahi, 2017).

According to Sharma (2017), probability is a sampling system whereby the probability of selecting each person is the same. Other authors call this random sampling. This sampling method needs more effort but is more truthful.

Non-probability sampling is based on a non-random means of selection. This can be more relevant to some studies, for there are challenges to access the broader population. However, it provides a less strong base from which to generalize.

For this study, the researcher used non-probability sampling. This sampling method is a purposive sampling method that supports the necessity of obtaining information only from people who can provide the needed information and those that meet the researcher's standard. Purposive sampling is also referred to as judgmental sampling, subjective or choosy sampling. It involves sampling techniques that depend on the researcher's judgment on selecting the sample that is to be studied. This sampling type consists of maximum variation sampling, identical sampling, expert sampling, total population sampling, and representative sampling (Sharma, 2017). Saunders (2011) supports purposive sampling when the researcher is working with small samples, including case study

research, and when one wishes to select particularly informative cases. This study is a case study of a single department in KZN.

Saunders (2011) states that it allows a researcher to apply his/her judgment to decide on the cases that direct the researcher to find answers to research questions and achieve the research objectives. Therefore, purposive sampling in the form of judgment was used because the research focuses on SCM employees as they have the information required to answer the research question. Judgment sampling was used because there are a limited number of people with the required information.

Secondly, quota sampling was used in the form of proportionate stratified sampling to subdivide the group to form two parts. Sharma (2017) states that quota sampling is used when the researcher feels that it is easy to get the sample but still tries to get the most representative sample of the population. In essence, it equivalent to probability sampling, which is called stratified random sampling. However, quota sampling is faster and stress-free to use because it does not need a sampling size.

4.4.2 SAMPLING AND SAMPLE FRAME

Sampling is the process of sub-dividing the population size for the investigation. It is a process of selecting specific portions of the data set to measure the various characteristics of different people with different beliefs and attitudes (Rahi, 2017). Sharma (2017) defines sampling as a system used by a researcher to draw smaller portions to represent items or persons from a large population, to stand as a data source as per the study's aims. Therefore, the researcher must consider some critical factors which include:

1. population difference,
2. population size,
3. study aims and objectives,
4. desired results,
5. homogeneity and heterogeneity,
6. sampling techniques used, and
7. the preciseness of the interpretation of population.

Sampling size defines the size from which the sample of the targeted population can be selected. Creswell and Creswell (2017) and Rahi (2017) assert that “sample size is a list of parts in the

targeted group from which the sample will be drawn.” However, broad discussion has developed around determining a sample size. It has been concluded that drawing a sample of the target population is still a challenge to the researcher. Researchers need to be careful when selecting a sample as it can affect the statistical technique.

4.5 DATA COLLECTION METHODS

Data is all around; everyone is bombarded with it every day from social media and books. However, it is not easy to collect relevant data. It requires a plan of action that outlines specific data required, and the most suitable methods to collect data for the study. Researchers need to choose where to get information to define phenomena (Walliman, 2017). Walliman (2017) further states that many methods are adopted to collect data, including primary and secondary data.

Interviews are a qualitative data collection method used to interact with participants in their usual location. To create a balance between data collected and richness, the researcher sampled participants into two groups.

4.5.1 PRIMARY DATA (INTERVIEWS)

Primary data is classified as data collected personally, as opposed to data that already exists at the beginning of the study (Ngobeni, 2016).

Interviews follow the same design in which questions are formulated and posed for an interviewee. These interviews can be easily quantified or produce statistical data.

Moreover, interviews questions can be structured or semi-structured. The researcher can add to probe more deeply into the interviewee's answer or ask clarifications in semi-structured interviews. In essence, this type of interview is more flexible, like a conversation between two people, and makes the interviewee more comfortable than the structured, formulated kind of calculated questions (Canals, 2017).

According to Okojie (2017), both types of interview questions can be open-ended and closed. Open-ended interviews give the participants a chance to express themselves in the way that suits them. Participants have the freedom to use their own words, as opposed to closed questions, which look for simple answers that might direct participants to give information that is focused only on the investigated phenomena.

Open-ended and structured questions were used in the study. The interview schedules started with the participants' demographic profile and followed with questions about the study focus. Specifically, for this study, open-ended questions gave the participant a chance to give more information on supply chain phenomena.

4.5.2 PRIMARY DATA (QUESTIONNAIRES)

Primary data can be collected through questionnaires and surveys. The researcher also used closed questionnaires to collect primary data. The questionnaire started with the participants' demographic profile and followed with questions about the study focus. The introduction to fill in the questionnaire was done, and questions were attended via email or physically, if needed. Participants were given three weeks to complete the questionnaires and were reminded a week before the deadline.

4.5.3 SECONDARY DATA

Secondary data is defined as a research strategy that involves a little exchange between participants and the researcher, or none. It is a recording method or unremarkable measure that is not reactive (Ngobeni, 2016).

The researcher used secondary data from different official documents such as government legislation, departmental websites, reports, and newspaper articles, which presented more recent information on various aspects regarding supply chain processes.

4.6 ANALYSIS OF DATA

Data analysis is a systematic way of interpreting data collected from the research questionnaires and a solid conclusion (Maleka, 2016). For this study, data was collected through interviews with SCM managers and questionnaires that were distributed to SCM officials. The data was then analyzed and interpreted. Kothari (2004) states that this process involves editing, classifying as well as tabulating data through codes.

Different tools for analyzing data are used for different methods of collecting data. These tools include thematic analysis and content analysis. Content analysis is a tool used to analyze the text's content qualitatively and quantitatively. Content analysis is used when there are many texts to analyze (such as news stories online reviews) (Saunders, 2011). According to Krippendorff (2018), content analysis is original to communication research.

Thematic analysis is a systematic method of identifying, analyzing, and giving insight into themes of data sets (Braun et al., 2019). Braun et al. (2019), further state that identifying commonalities or writing and making themes based on those commonalities. The data collected from interviews was first transcribed using a tape recorder.

Thematic analysis in this study's context was used to analyze interview feedback whereby the collected data was systematically examined to develop similarities between the ideas emerging on supply chain processes. This was done through data transcription, sorting, categorizing, and synthesizing data, and identifying the crosscutting themes that are linked to research objectives. Those themes were translated into informed discussions. Besides this, different software was used to analyze the data collected by different instruments. The questionnaires were developed on Survey Monkey, and the link was sent via email. The introduction to fill in the questionnaire was done, and questions were attended via email or physically if needed. Participants were given three weeks to complete the questionnaires after receiving the link and were reminded a week before the deadline. Survey Monkey was used to analyze data collected through the questionnaire and provided support through descriptive analysis.

4.7 ETHICAL CONSIDERATIONS OF THE STUDY

Ethics norms are essential, and the researcher needs to adhere to these when conducting research. Research must first promote the truth, contribute to the body of knowledge, and minimize falsified data. Second, most research usually comprises many different people from various disciplines. Therefore, ethical norms promote collaborative work ethics such as trust and mutual respect among research players. Lastly, ethical norms hold the researcher accountable for participants (Shaari et al., 2017).

Consideration of ethical issues is necessary when the study involves people, especially when there are possibilities of conflict of interest (Ngxesha, 2015).

For the study, the researcher-maintained originality and carried the research using proper documentation. The researcher kept on fulfilling the conditions of honesty and created trust.

4.7.1 SECONDARY DATA ETHICAL CONSIDERATIONS

There is no research field wherein the researcher can depend only on personal thoughts and ideas and develop personal theories and conceptual frameworks. Researchers can avoid accusations of any plagiarism by acknowledging other's original ideas (Walliman, 2017).

For this study, secondary data was mainly used, and ethical considerations were adhered to by the researcher using in-text references and the compiling a bibliography.

4.7.2 PRIMARY DATA ETHICAL CONSIDERATIONS

The study that involves participants always raises ethical issues about how the researcher treats the participants. Participants should be well treated concerning the study (Walliman, 2017).

4.7.2.1 INFORMED CONSENT

All research participants must be given a choice to participate, and not be forced by remuneration promises. However, their choice must be based on understanding the research purpose and risks they might encounter. If vulnerable participants are part of the research, participants must be protected (Weinbaum et al., 2019).

Informed consent was requested from participants in English, which was understood by the participants. The study was formally introduced verbally and in the consent form. Participants were informed via email and invited to form part of the study.

Survey questionnaires were designed on Survey Monkey, and the link was forwarded to participants. The informed consent outlined the storage methods for completed questionnaires, as the researcher felt the respondents might have a fear of being known. Moreover, the respondents were also informed of the right to withdraw if they felt they would like to do so. In the case where the respondent might be uncomfortable to state the reason for withdrawal, they would not be compelled to disclose the reason.

When a tape recorder was used in the interviews, respondents were informed beforehand.

4.7.2.2. CONFIDENTIALITY AND ANONYMITY

Confidentiality refers to the way data will be shared, and stored with the researcher, and the participants' agreement. Anonymity is defined as privacy, which means participants have a right to remain anonymous and control how others access their personal information (Weinbaum et al., 2019).

The participant's details were kept private. This promoted trust and confidentiality during the interview. The research findings are based on the data collected by the researcher from the respondents.

4.7.2.3 CONFLICT OF INTEREST

A researcher should not use any remuneration or other kinds of gifts for their research because it could increase bias in the results. Conflict of interest is directed towards the researcher. However, it may influence participants if they are given any incentive to participate (Weinbaum et al., 2019). The informed consent stated that there would be no incentive for participating in the study.

4.8 LIMITATION OF THE STUDY

While this study contributes to the South African public sectors and highlights their SCM processes, there are limitations of the study, as indicated below:

- It was not easy to access more information in the case where participants felt unwilling to disclose in-depth information due to the department's confidentiality.
- Lack of financial support to conduct the study.

4.9 CONCLUSION

In this chapter, the research methodology approach was discussed and its relevance to the study. The study population and sampling were identified and designed. Questionnaires and interviews, as the selected data instruments, were developed based on the study's aims and objectives and a literature review. Specific limitations in conducting the study were outlined, which prevented more information from being collected.

The subsequent chapters present the findings of the study and analyze and interpret the study.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

5.1 INTRODUCTION

Chapter four provided the research design and methods of the study. This chapter presents the data and analysis of the study to evaluate the SCM processes adopted by EDTEA. The population of the study comprised SC management (Assistant Director to Director) and other SCM officials. The total sample size of the population of the study consisted of 22 respondents.

The data was collected using two methods as the sample size was divided into two groups. Therefore, the study's findings are as per interviews conducted with SCM management and as per questionnaires distributed to other SCM officials. The questionnaire consisted of two sections: the first section consisted of the demographics and the second section focused on SCM processes. Moreover, like any other data collection instrument, survey questionnaires are not without any criticism. There is an assumption that the researcher and the respondents can understand and interpret the wording in the same manner. The closed questions may limit the respondent from further discussing and explaining more on the particular topic. To avoid the bias of language and questionnaire wording difference, where there was a need for explanation, the researcher was available (Guma, 2018). The purpose of the questionnaire was to determine their thoughts and judgment.

Interviews were in a structured format. They were analyzed and interpreted using descriptive analysis.

5.2 PART 1: QUESTIONNAIRE: QUANTITATIVE DATA ANALYSIS

The questionnaire findings start with a demographic profile of the respondents, and after that, SCM processes are presented. A descriptive analysis is used to present the findings.

5.2.1 SECTION A: BIOGRAPHICAL DATA

This section of the questionnaire introduces the biographic summary of the respondent. This biographic information comprises gender, age, and qualifications of SCM officials. Questionnaires were distributed to 17 respondents, and 12 questionnaires were received, even though four were not received back since other respondents were attending site briefings outside Pietermaritzburg.

5.2.1.1 Gender of the respondents

Table 5.2.1.1: Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	10	83.3%	83.3%	83.3%
	Male	2	16.7%	16.7%	100.0%
	Total	12	100.0%	100.0%	

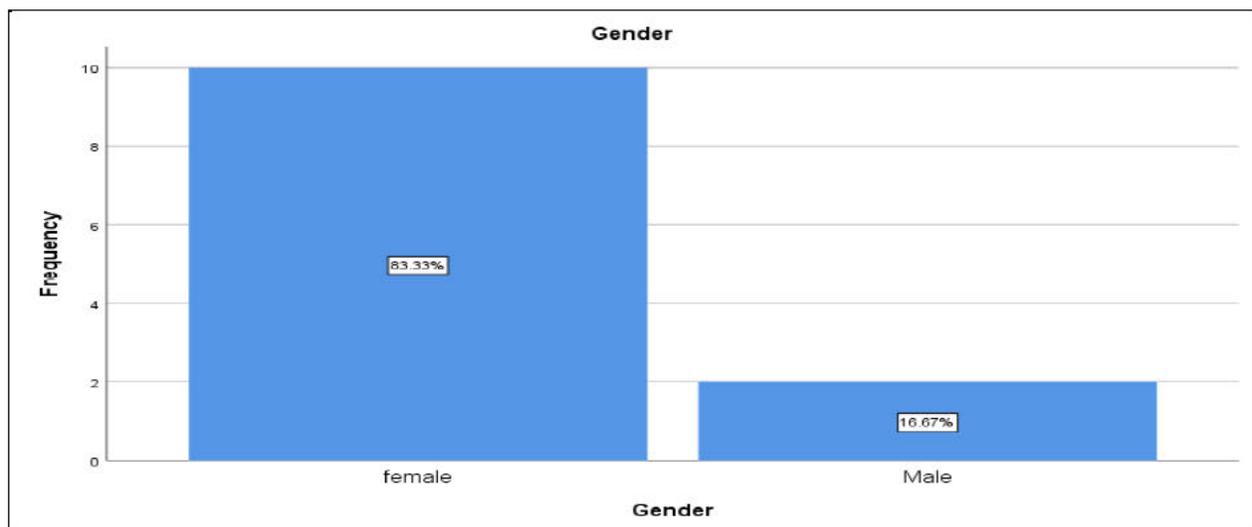


Figure 5.2.1.1: Gender of the respondents

As shown in Figure 5.2.1.1 and the table above, the sample was made up of 83.3% females and 16.7% males. This information was required to understand the gender composition of the respondents. The first category of the demographic profile shows that more females than males participated in the study, which can conclude that there are more females than males in SCM.

5.2.1.2 Age of respondents

Table 5.2.1.2: Age of respondents

Age						
		Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	Older than 22 but younger than 25	1	8.3%	8.3%	8.3%	
	Older than 25 but younger than 30	8	66.7%	66.7%	75.0%	
	Older than 30 but younger than 50	3	25.0%	25.0%	100.0%	
	Total	12	100.0%	100.0%		

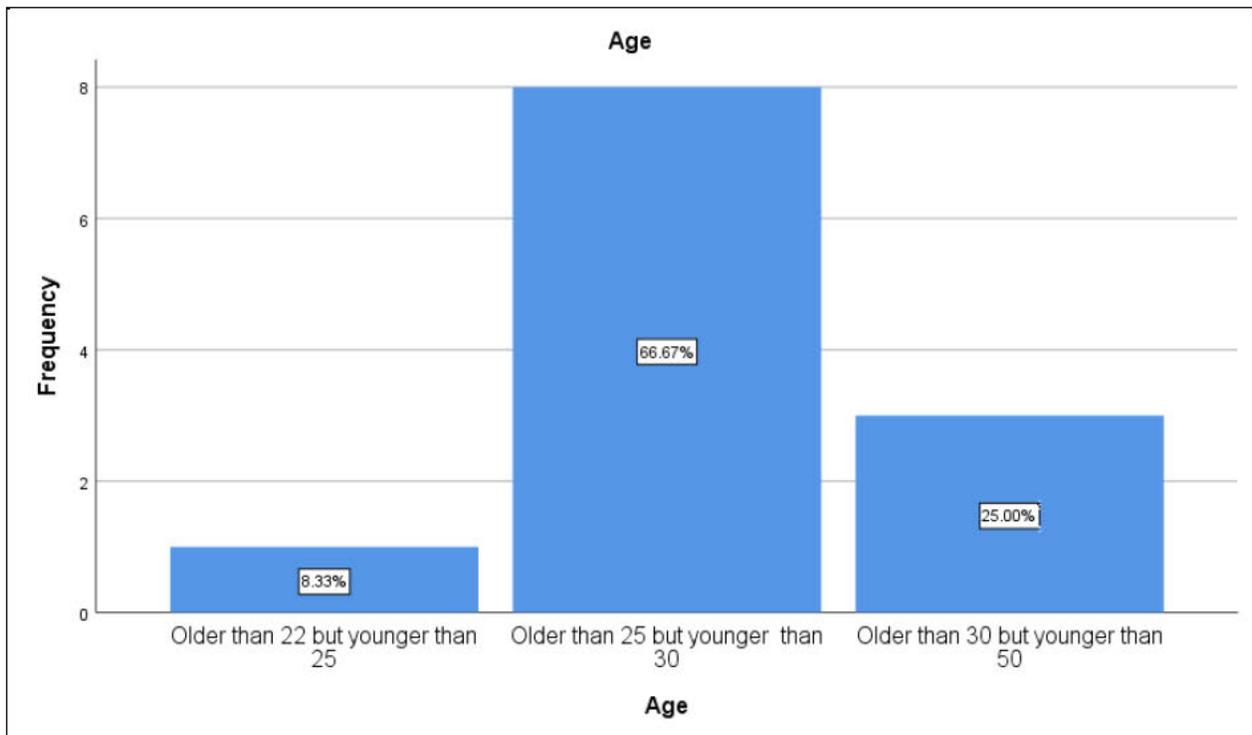


Figure 5.2.1.2: Age of respondents

Figure 5.2.1.2 and the table above indicate that the majority of the respondents were 25-30 years of age, which also reflected 66% in total, followed by the age group between 30-50 years at 25%. The last age shown is 22-25, which made up of 8% in total.

5.2.1.3 Race of respondents

Table 5.2.1.3: Race of respondents

Race					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	African	11	91.7%	91.7%	91.7%
	Colored	1	8.3%	8.3%	100.0%
	Total	12	100.0%	100.0%	

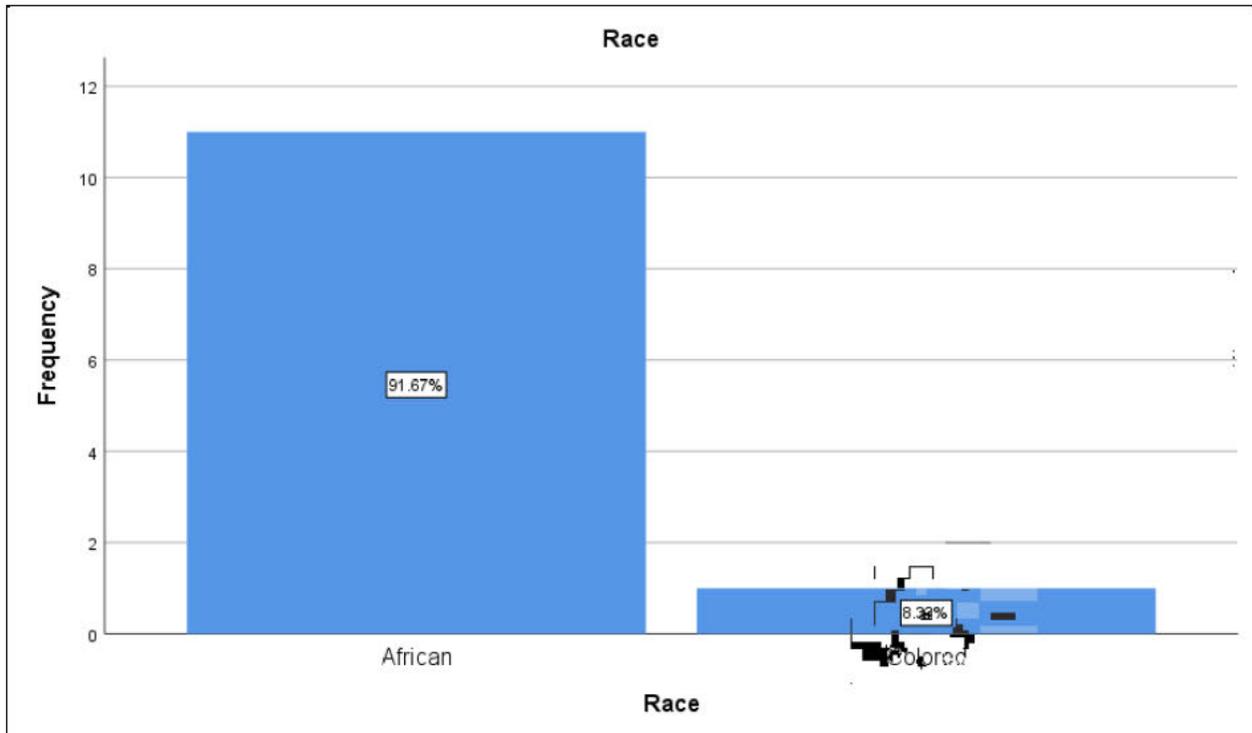


Figure 5.2.1.3: Race of respondents

Figure 5.2.1.3 and the table above show that 91.7% of respondents were black, followed by 8.3% who were people of color. Therefore, this shows that only two races responded to questionnaires.

5.2.1.4 Educational qualifications

Table 5.2.1.2: Educational qualifications

Educational qualification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Technical diploma	3	25.0%	25.0%	25.0%
	Postgraduate	8	66.7%	66.7%	91.7%
	Not comfortable to answer this one	1	8.3%	8.3%	100.0%

	Total	12	100.0%	100.0%	
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The above (table 5.2.1.4) shows that most respondents had postgraduate degrees, at 66.7%, followed by diplomas at 25.0%; only 8.3% of respondents were not comfortable telling their qualification.

Therefore, from the above information, it can be noted that respondents are well informed of SCM. They can grasp and understand what is required of them at work and familiarize themselves with SC public policies. Jayalath (2016), quoting Ameyaw (2012), highlighted the importance of working with qualified officials to improve an organization's performance.

5.2.2 SECTION B: JOB & EXPERIENCE

5.2.2.1 Period of employment in the department

Table 5.2.2.1: Period of employment in the department

How long you have been working for the department					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 6 months but less than 1 year	2	16.7%	16.7%	16.7%
	More than 1 year but less than 2 years	5	41.7%	41.7%	58.3%
	Over 2 years	5	41.7%	41.7%	100.0%
	Total	12	100.0%	100.0%	

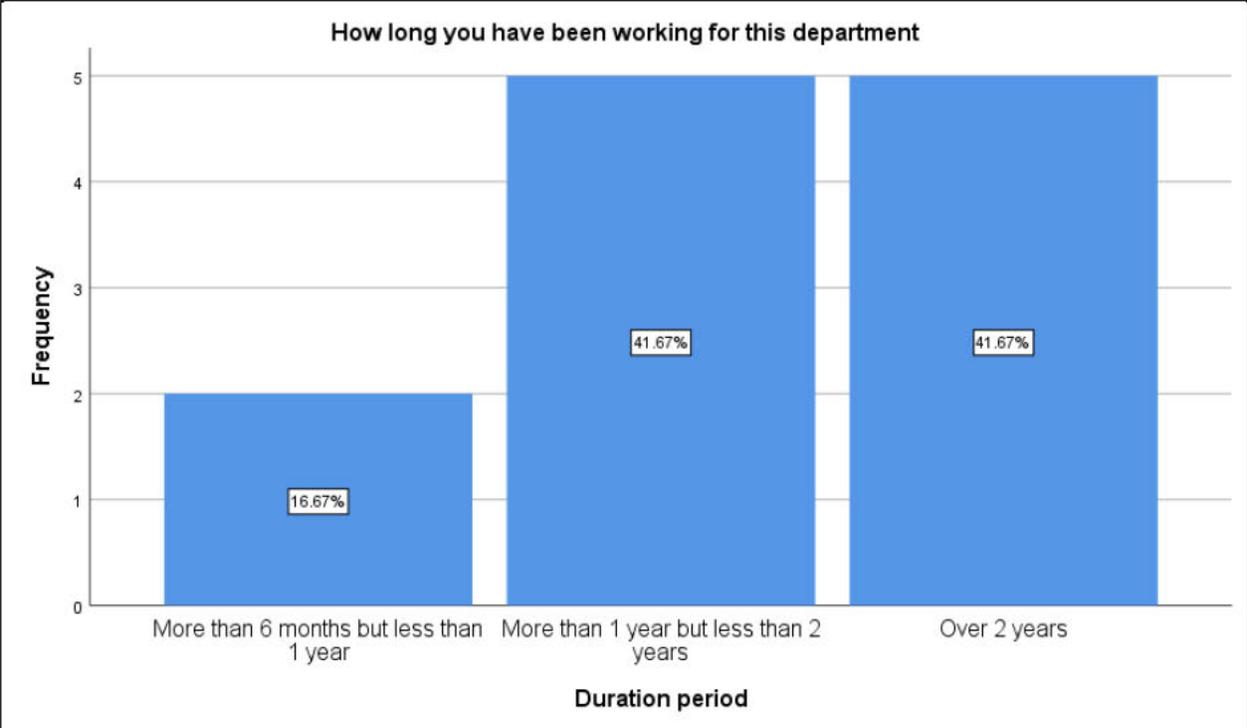


Figure 5.2.2.1: Period of employment in the department

Figure 5.2.2.1 and the table above of Section B indicate that 41.7 % of the respondents have been working for the department for more than one year but less than two years, and this is equal to respondents who have been working there for more than two years. The last duration is more than six months but less than one year, which made up 16.7% of the number of respondents.

5.2.2.2 Position

Table 5.2.2.2: Position in the department

Your position in the department					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Supervisor	1	8.3%	8.3%	8.3%
	Admin clerk	6	50.0%	50.0%	58.3%
	None of the above (For example intern)	5	41.7%	41.7%	100.0%

Total	12	100.0%	100.0%	
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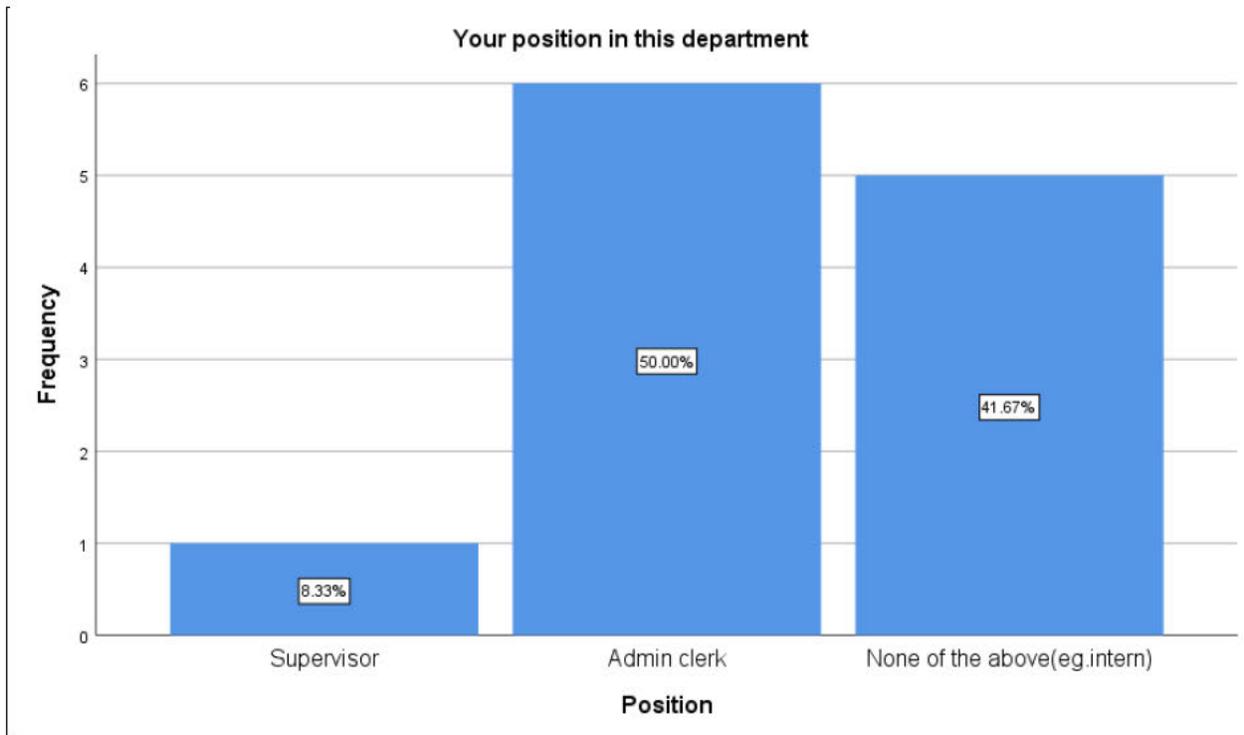


Figure 5.2.2.2: Position in the department

Figure 5.2.2.2 and the table above indicate that there are three levels of respondents, including the supervisor, admin clerk, and interns. The highest percentage is 50%, admin clerks, followed by interns, who made up 41.7%. The last group of respondents is 8.3%, who are supervisors. Therefore, most respondents of the questionnaires are admin clerks.

5.2.2.3 Period in the position

Table 5.2.2.3: Period in the position

How long you have been occupying the position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More than 6 months but less than 1 year	2	16.7%	16.7%	16.7%

More than 1 year but less than 2 years	5	41.7%	41.7%	58.3%
Over 2 years	5	41.7%	41.7%	100.0
Total	12	100.0%	100.0%	

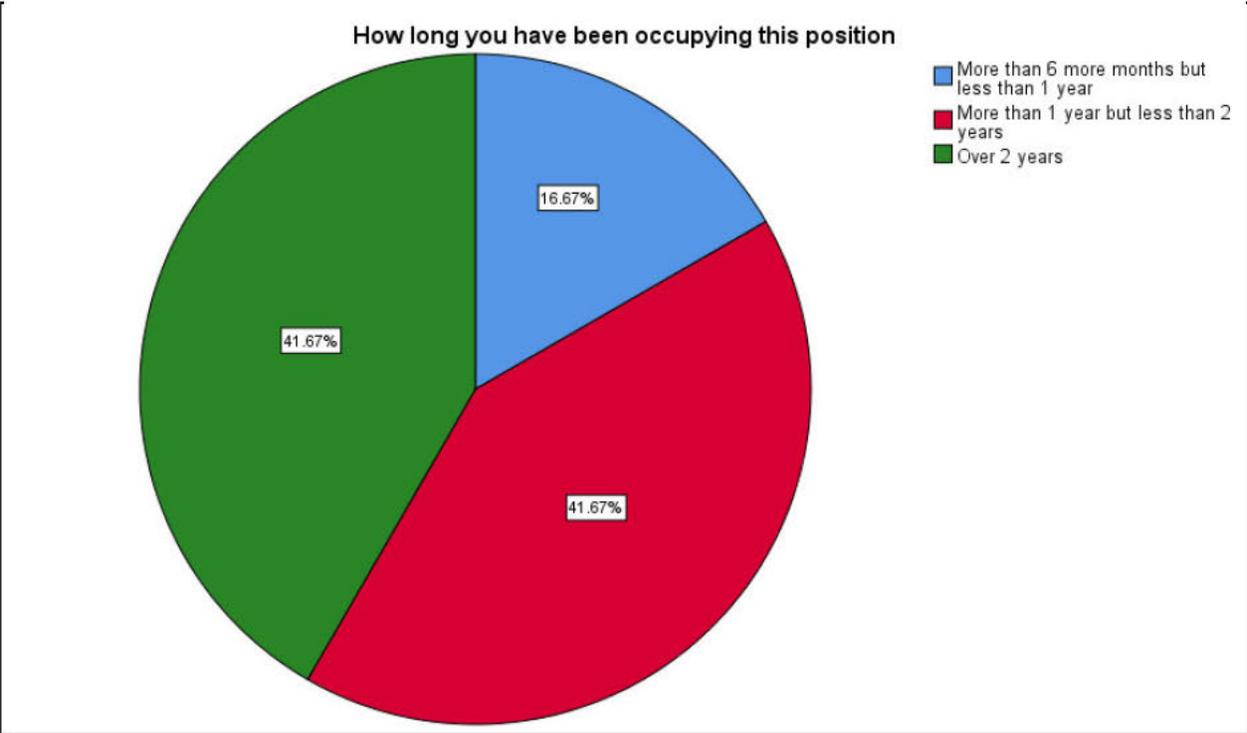


Figure 5.2.2.3: Period in the position

Figure 5.2.2.3 and the table above indicate the years of occupation in the position indicated in 5.2.2.2 as per respondent. The length of service occupying the position of the respondents was measured according to different categories, ranging from six months to over two years, and the highest percentage of participants is over two years (41.7%) and more than one year (41.7%). Respondents for more than six months but less than one year constituted 16.7%.

5.2.2.4 Duties and responsibilities

Table 5.2.2.4: Duties and responsibilities

Duties and responsibilities Frequencies

		Responses		Percent of Cases
		N	Percent	
Duties and responsibilities	Demand Management	6	24.0%	50.0%
	Acquisitions Management	8	32.0%	66.7%
	Assets and disposal Management	2	8.0%	16.7%
	Performance Management	2	8.0%	16.7%
	Logistics Management	5	20.0%	41.7%
	Risk Management	2	8.0%	16.7%
Total		25	100.0%	208.3%

a. Dichotomy group tabulated at value 1.

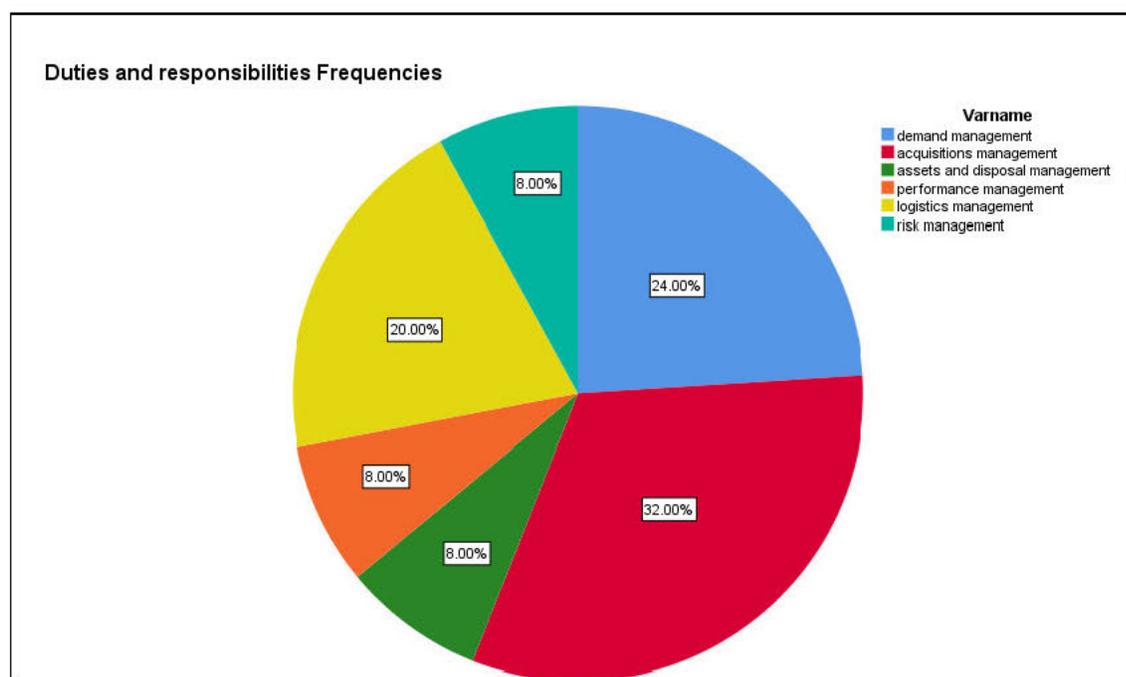


Figure 5.2.2.4: Duties and responsibilities

Figure 5.2.2.4 and the table above indicate which of the SCM elements (demand management, acquisition management, logistics management, disposal management, risk management, supply chain performance) are involved the respondents’ duties. The above table indicates that there are more officials involved in acquisition management (32.0%), followed by demand management (24.0%), and logistics management (20.0%). Assets and disposal management, performance management, and risk management constitute the same percentage (8.0%).

Therefore, this means that there are more participants work under acquisition management to answer acquisition related questions. However, it may happen that interns rotated or were still going to rotate, but the study was conducted while they were in the section of their choice, as above.

Table 5.2.2.4 shows that some were involved in more than one section or were exposed to the section. Hence the number of respondents increased to 25%, the total percentage is 100%, and percent of cases is 208.3%.

5.2.2.5 Worked for other department before joining this one

Table 5.2.2.5: Worked for other department before joining this one

Have you worked for other department before joining this one					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	5	41.7%	41.7%	41.7%
	No	7	58.3%	58.3%	100.0%
	Total	12	100.0%	100.0%	

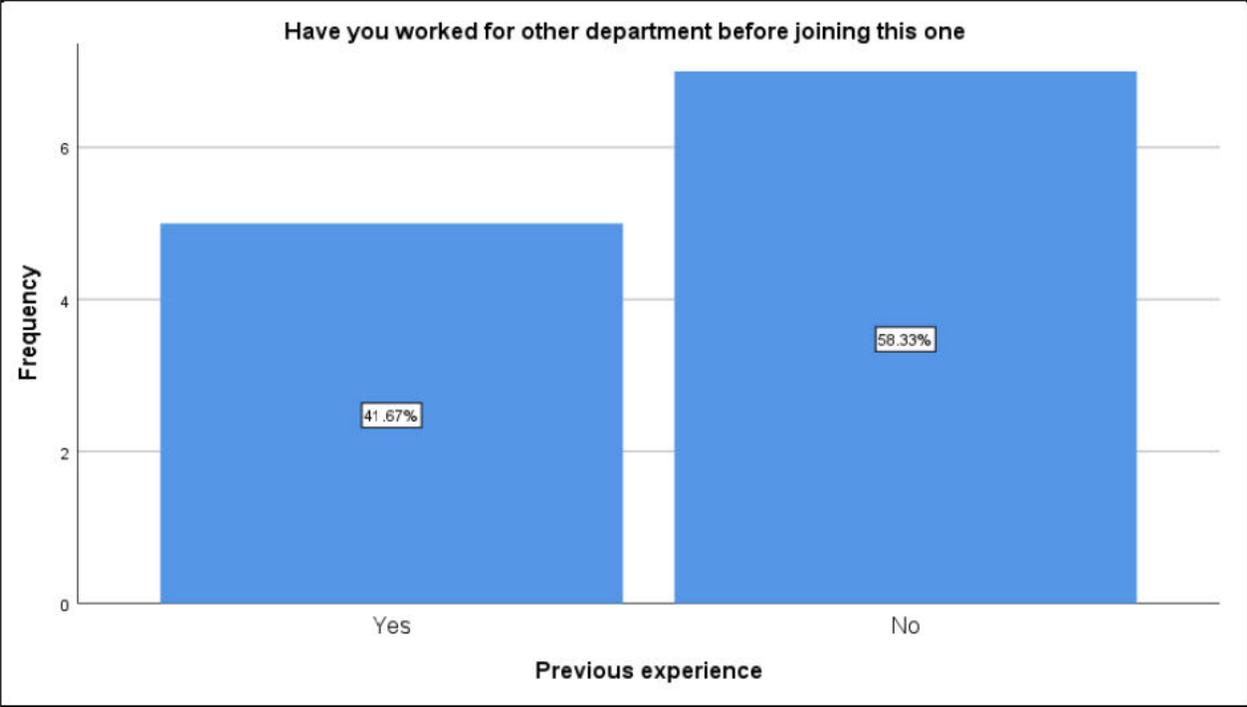


Figure 5.2.2.5: Worked for other department before joining this one

Figure 5.2.2.5 and the table above of Section (B) are based on the experience of the participants. It shows that a few participants worked for other departments before joining EDTEA (41.7%), compared to those who started in the department (58.3%).

5.2.3 SECTION C: EVALUATION OF SCM PROCESSES ADOPTED

5.2.3.1 How is the supply chain of the department?

Table 5.2.3.1: Supply chain of the department

How is supply chain of the department undertaken procedurally?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Centralized	10	83.3%	83.3%	83.3%
	Decentralized	2	16.7%	16.7%	100.0%
	Total	12	100.0%	100.0%	

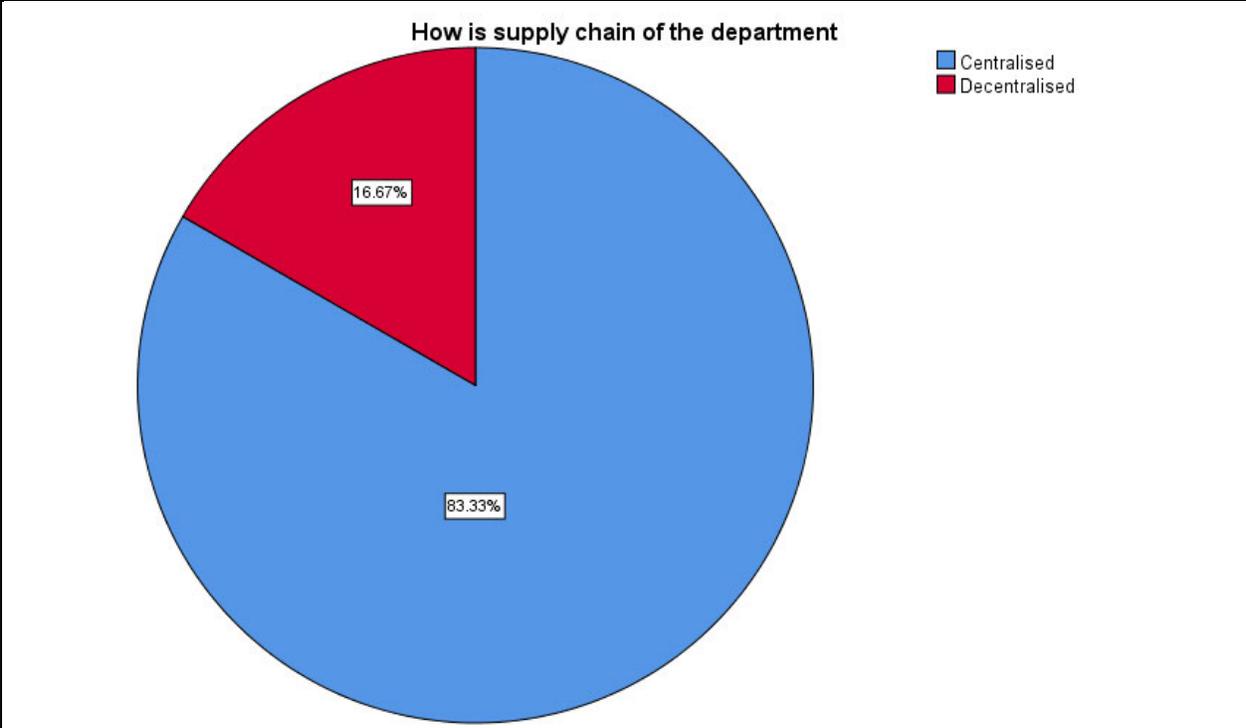


Figure 5.2.3.1: Supply chain of the department

Figure 5.2.3.1 and the table above show that 83.3% of respondents said SCM is centralized, and 16.7% said it is decentralized. Therefore, it can be concluded that SCM is centralized as the department directed the researcher to one region of the department, and this is supported by 83.3% of respondents. In essence, a centralized system tries to implement SCM methods through communal-based decisions, guided by strategic imperatives embedded in knowledge management and sharing. This decreases procurement costs, and units can react adequately and timorously to potential changes in the supply and demand (Okojie, 2017). (Brooks, 2016) states that advocates for centralization argue that centralized SCM is suitable to address procurement policy to achieve social and environmental objectives. A decentralized system cannot consider the effects of environmental and social standards and criteria on procurement processes. Additionally, decentralized systems experience challenges in balancing local suppliers' interests against green suppliers compared to centralized systems (Brooks, 2016).

5.2.3.2 Processes adopted by the department

The SCM regulation of 2005 in Section (16), as controlled by the PFMA, directs the public sector to adopt the stated elements of SCM to improve the growth and development of the public sector (Deka, 2016).

Table 5.2.3.2: Processes adopted by the department

Processes adopted by the department Frequencies				
		Responses		Percent of Cases
		N	Percent	
Processes adopted by the department	Demand management	12	19.7%	100.0%
	Acquisition management	12	19.7%	100.0%
	Assets and disposal management	12	19.7%	100.0%
	Logistic management	12	19.7%	100.0%
	Risk management	5	8.2%	41.7%
	Contract and performance management	4	6.6%	33.3%
	All of the above	4	6.6%	33.3%
Total		61	100.0%	508.3%
a. Dichotomy group tabulated at value 1.				

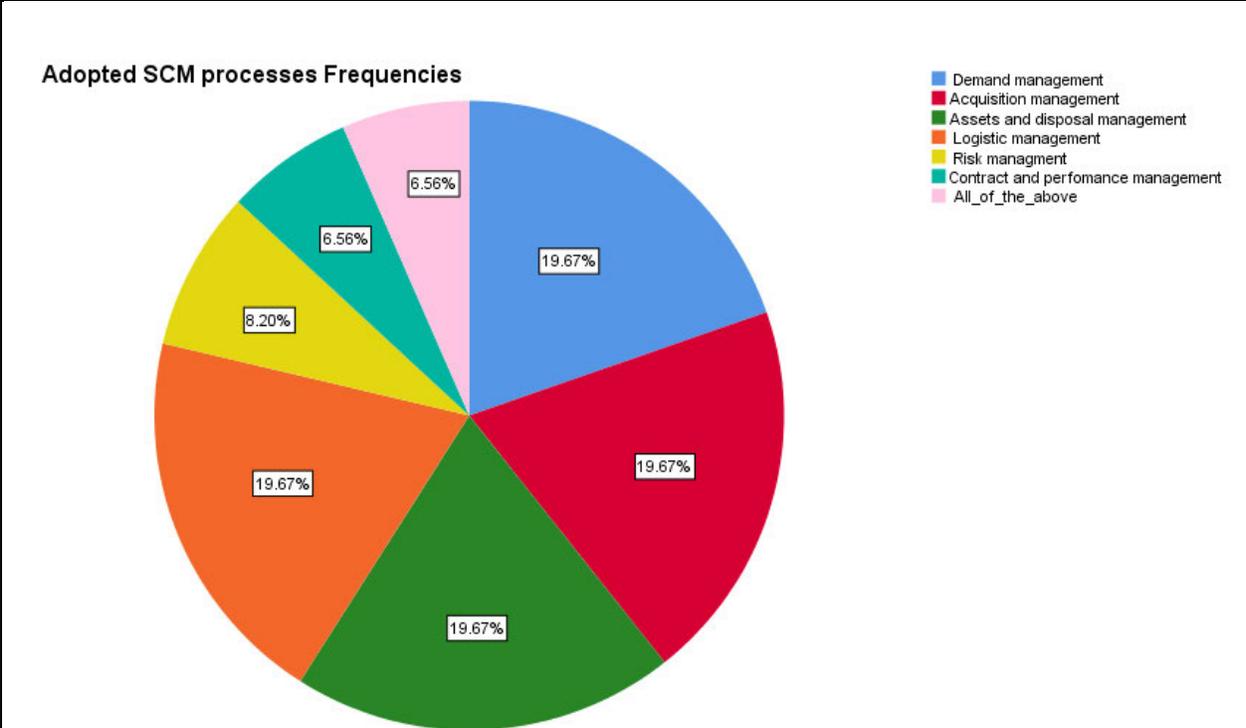


Figure 5.2.3.2: Processes adopted by the department

Figure 5.2.3.2 and the table above indicate the various SCM elements adopted in the department. The respondents were asked to choose which of these elements the department has. The above findings of 19.67% of respondents show that demand management, acquisition management, assets, and disposal management have the highest percentage. Risk management constitutes 8.20%. The last element is contract and performance management, with 6.56% of respondents.

Moreover, 6.56% of respondents believed that the department adopts all of the above elements. Therefore, it can be concluded that the department has demand, acquisition, assets, and disposal management. According to Ngobeni (2016), SCM functions within a national government's regulatory framework and expands to provinces and municipalities to apply policies. This regulatory framework is illustrated by the SCM model that includes demand management, acquisition management, logistics management, disposal management, management, and supply chain performance assessment. Furthermore, Vabaza (2016), states that proper implementation of these elements promotes SCM principles such as value for money, open and effective competition, ethics and fair dealings, accountability and reporting, and equity, thus creating uniformity in procurement.

5.2.3.3 Databases used to select suppliers

In this section, the aim was to establish the effectiveness of various elements within select databases in the public sector. There were three databases, and the findings are as follows:

Table 5.2.3.3: Databases used to select suppliers

Databases used Frequencies				
		Responses		
		N	Percent	Percent of Cases
Databases used	CIDB	4	20.0%	33.3%
	CSD	12	60.0%	100.0%
	SITA	4	20.0%	33.3%
Total		20	100.0%	166.7%
a. Dichotomy group tabulated at value 1.				

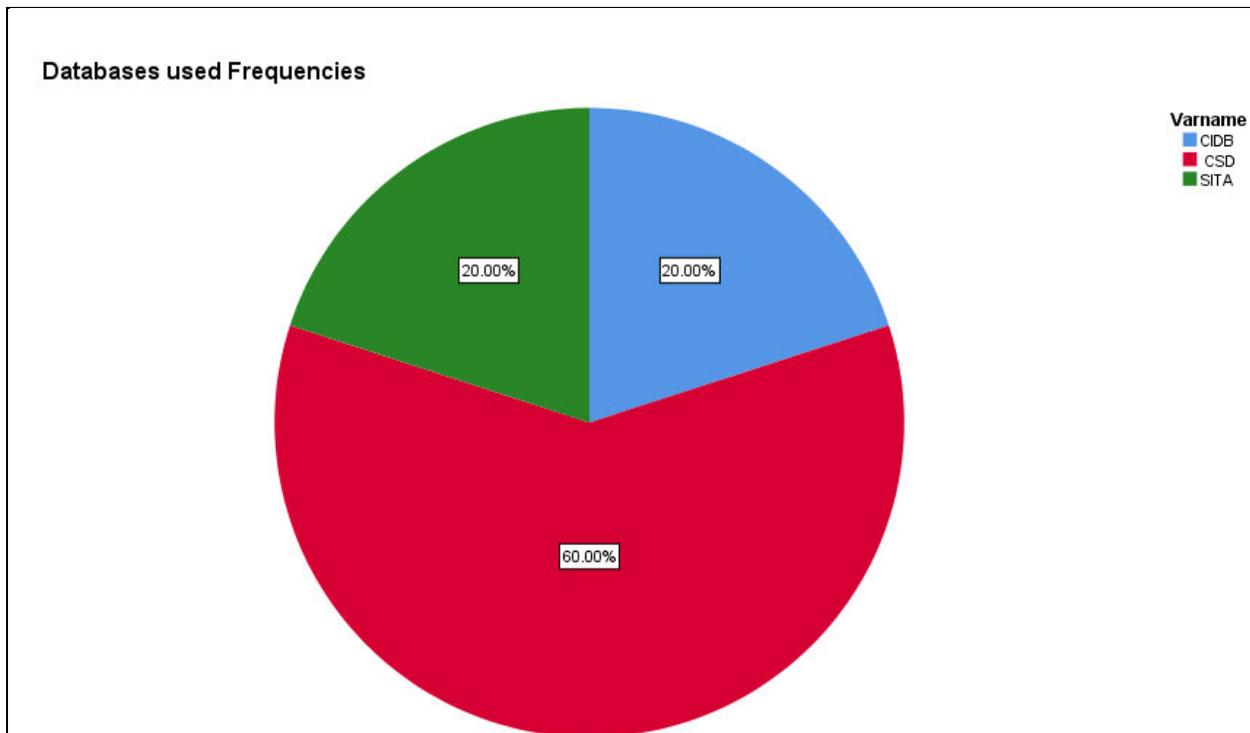


Figure 5.2.3.3: Databases used to select suppliers

Figure 5.2.3.3 and the table above indicate that 60.0% of respondents said Central Supplier Database (CSD), while 20.0% of respondents indicated Construction Industry Development Board (CIDB) and State Information Technology Agency (SITA). This can raise a concern on how the department procures IT devices, if 20.0% of respondents are unaware of SITA same applies to CIDB. However, for CIDB, it can be assumed that the department leases its buildings. The Construction Register Services consists of a Contractor Register and Project Register, which have been set up in terms of CIDB Act No.38 of 2000. The Contractor Register generates grades and categorizes using financial and work experience. Therefore, the public sector must relate to the Contractors Register when considering construction work tenders (Mathinye, 2016).

The highest number of respondents believes that CSD is used. Therefore, it can be concluded that the department verifies supplier's information on CSD, and includes bank account holder information, in the service of the state status, tax compliance status, identity number, BBBEE status level, tender defaulting, restriction status, and any additional and supplementary verification information communicated by the National Treasury of South Africa. Moreover, it can be concluded that SCM supports suppliers' businesses because they are not requesting some

documents, while trimming down the likelihood of corruption and addressing the administration requirements (Mabanga, 2018).

The Act creates the State Information Technology Agency (SITA) to provide information technology to the state administration.

It obliges all national and provincial state departments to procure all information technology-related goods or services through SITA (Matemotsa, 2018).

5.2.3.4 Database effectiveness

5.2.3.4: (A) CIDB effectiveness

Table 5.2.3.4: (A) CIDB effectiveness

CIDB effectiveness					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	1	8.3%	8.3%	8.3%
	Good	2	16.7%	16.7%	25.0%
	Very Good	1	8.3%	8.3%	33.3%
	No response	8	66.7%	66.7%	100.0%
	Total	12	100.0%	100.0%	

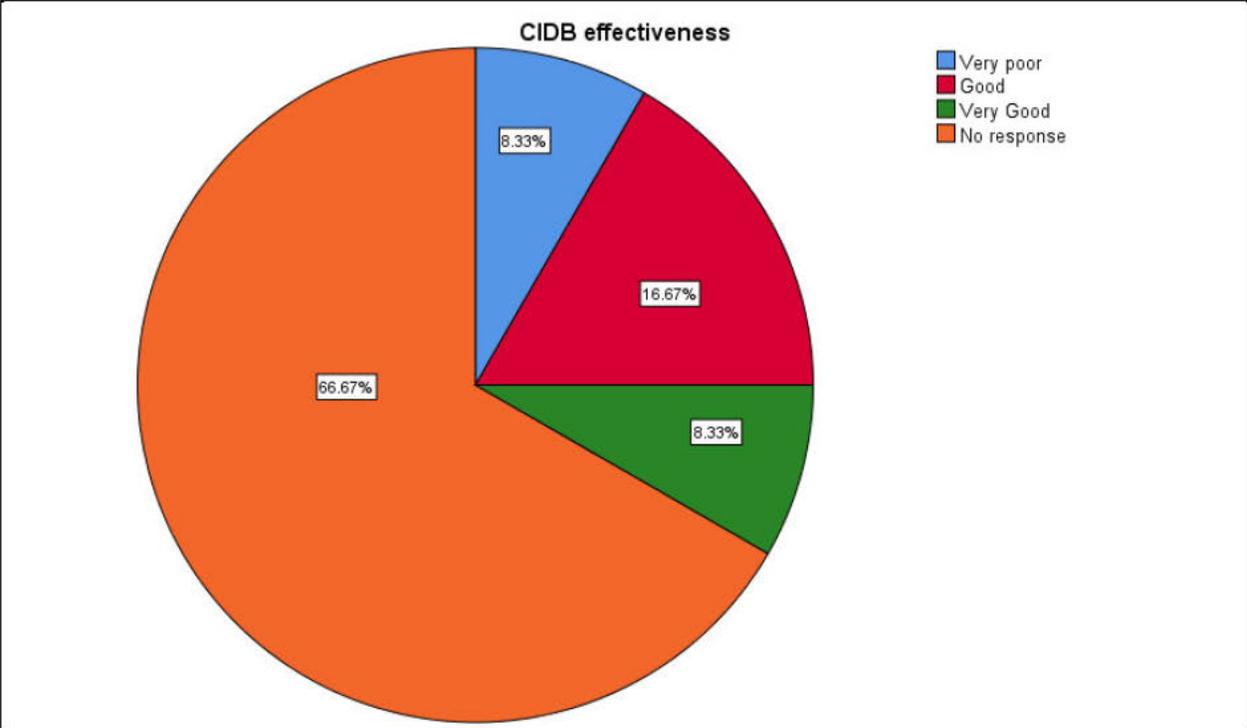


Figure 5.2.3.4: (A) CIDB effectiveness

Figure 5.2.3.4 (A) and the tables above show that four people responded to this question; this means that from figure 5.2.3.4(A), only these respondents said CIDB is used, and eight respondents did not respond. CIDB was regarded to be good by 16.7% of respondents, while it was considered very poor and very good at 8.3%, respectively.

5.2.3.4 (B) CSD effectiveness

Table 5.2.3.4: (B) CSD effectiveness

CSD effectiveness					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very poor	2	16.7%	16.7%	16.7%
	Poor	1	8.3%	8.3%	25.0%
	Good	5	41.7%	41.7%	66.7%
	Very Good	4	33.3%	33.3%	100.0%

Total	12	100.0%	100.0%	
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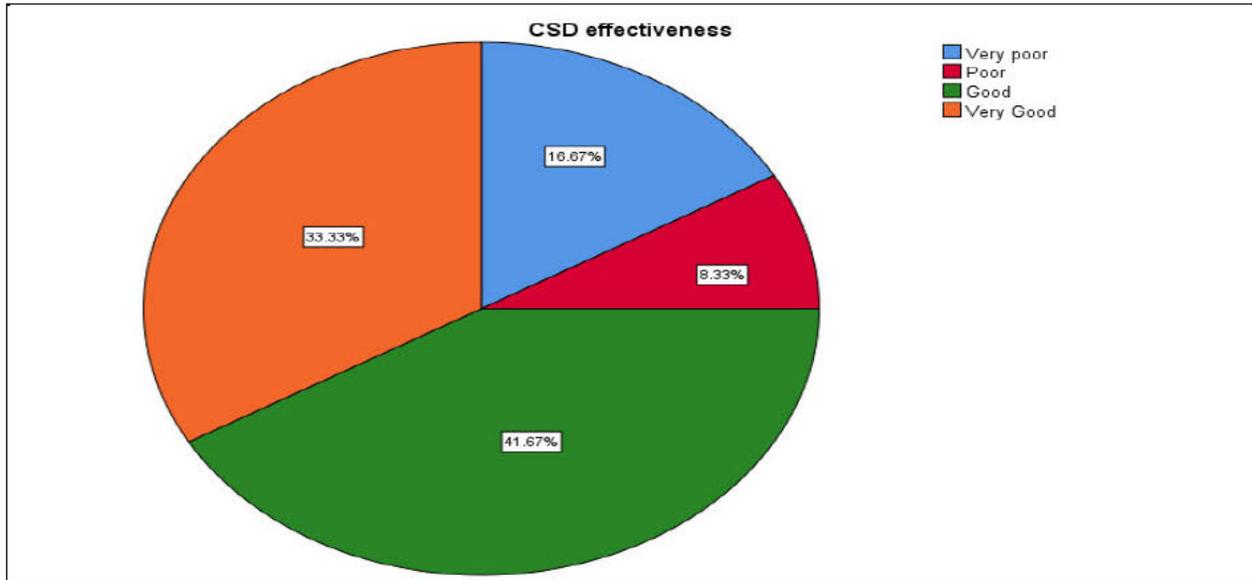


Figure 5.2.3.4 (B) CSD effectiveness

Figure 5.2.3.4 (B) and the table above show that all respondents have rated the CSD database; this means from the above tables and figure 5.2.3.3, it is selected by all respondents as the one used. CSD was said to be good by 41.7% of respondents, while it was said to be very good by 33.3%, followed by very poor (16.7%) and poor (8.3%). It can be concluded that CSD is used to select suppliers and it is good as per the respondents' percentage over CSD and the rate of effectiveness.

5.2.3.4 (C) SITA Effectiveness

Table 5.2.3.4: (C) SITA Effectiveness

SITA Effectiveness					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Good	4	33.3%	33.3%	33.3%
	Very Good	1	8.3%	8.3%	41.7%

No response	7	58.3%	58.3%	100.0%
Total	12	100.0%	100.0%	

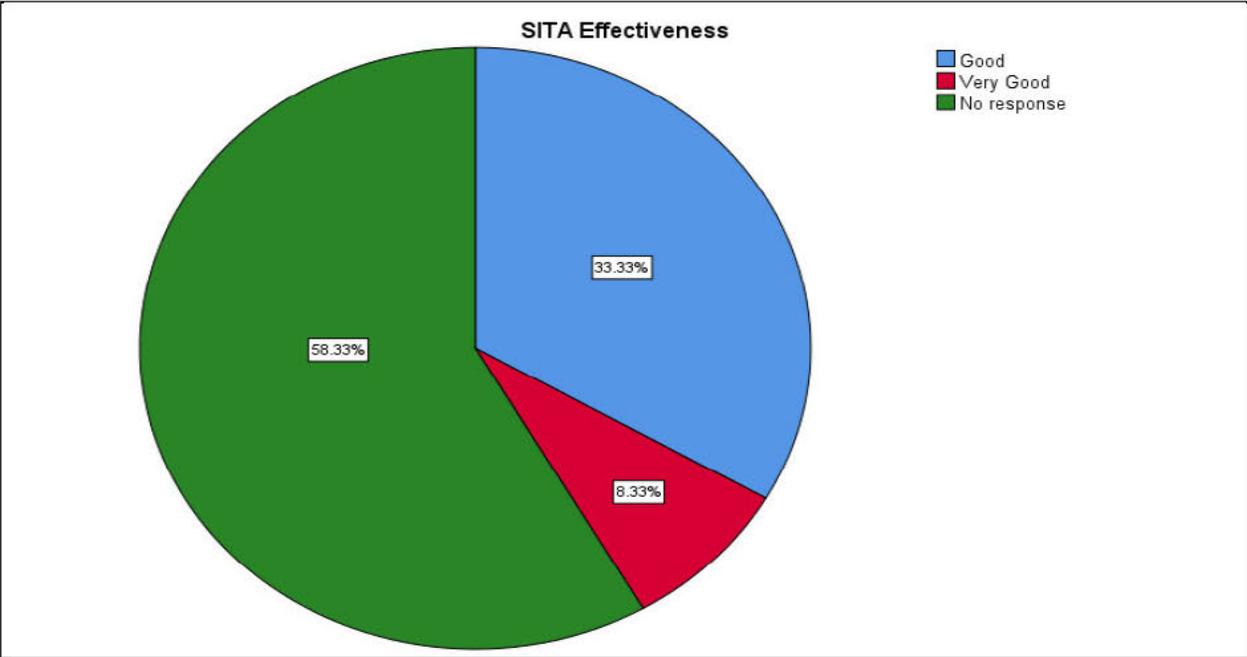


Figure 5.2.3.4: (C) SITA Effectiveness

Figure 5.2.3.4 (C) and the tables above shows that 41.7% responded to this question, and 58.3% did not respond. It can be said that in figure 5.2.3.4(C) and the tables above only five responded to the question. SITA was said to be good by 33.3% and very good by 8.3%.

The finding indicates that 100.0 % of respondents to CSD, with 41.7% indicating good and 33.3% very good, followed by 41.7% of respondents to SITA, with 33.3 % indicating good and 8.3% very good. The last database is CIDB, with 33.3% of respondents, 16.7% indicated it was good and 8.3% very good and poor.

It can be concluded that CSD is used, and it is good, and other databases are not that popular with everyone in SCM.

5.2.3.5 Days given to directorates to submit requisitions

Table 5.2.3.5b: Days given to directorates to submit requisitions

Days given to directorates to submit requisitions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3 days	4	33.3%	33.3%	33.3%
	More	8	66.7%	66.7%	100.0%
	Total	12	100.0%	100.0%	

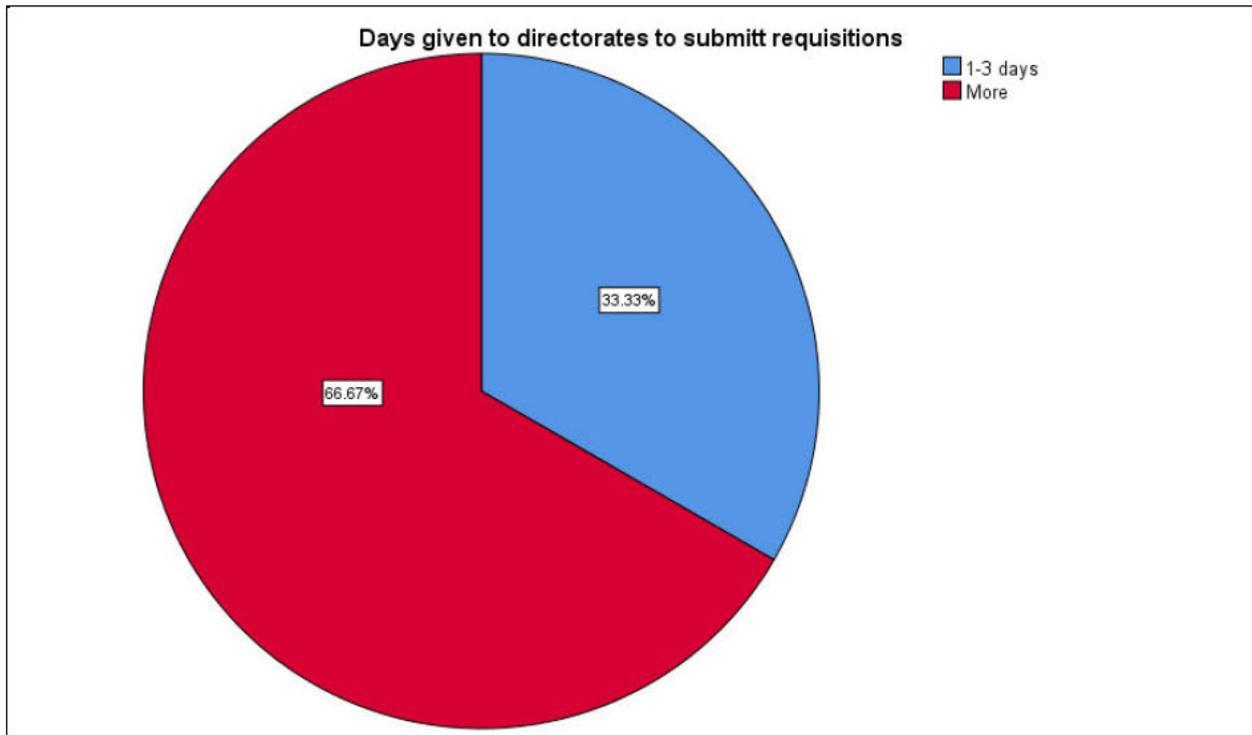


Figure 5.2.3.5: Days given to directorates to submit requisitions

Respondents were requested to indicate how many days are given to directorates to submit the requisition: (1-3), (3-6), (6-9), and more. Most respondents, 66.7%, believe that the directorates are given more days, while 33.3 % of respondents believe 1-3 days.

5.2.3.6 Does it happen that directorate submits late requisitions?

Table 5.2.3.6: Submission of late requisitions

Does it happen that directorate submits late requisitions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	83.3%	83.3%	83.3%
	No	2	16.7%	16.7%	100.0%
	Total	12	100.0%	100.0%	

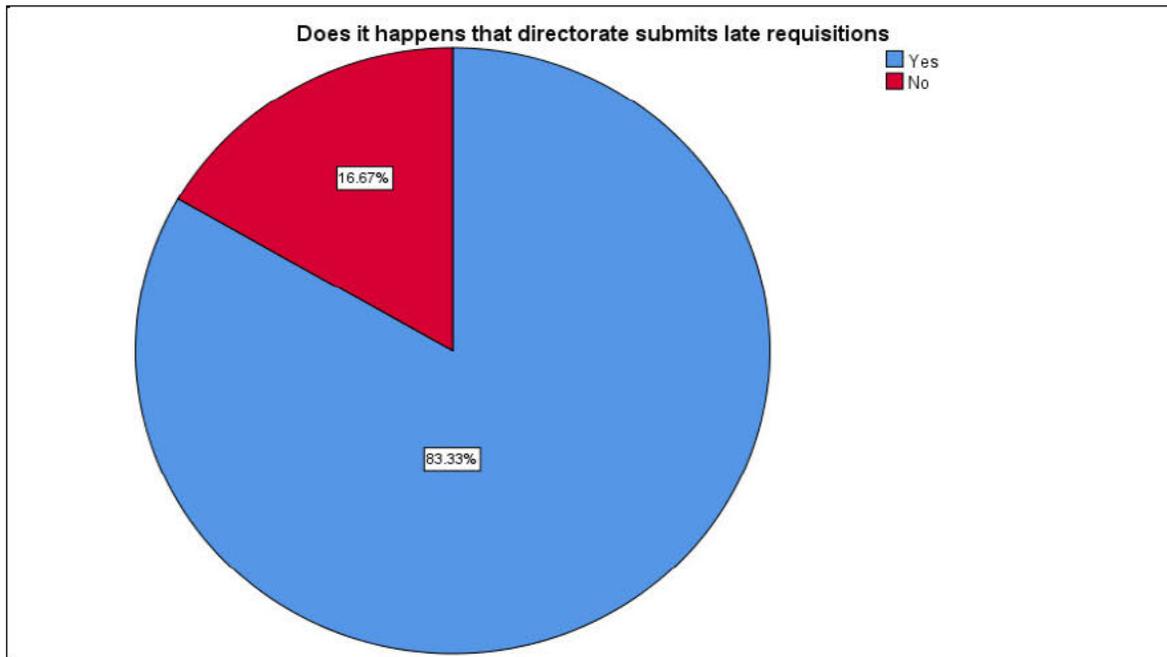


Figure 5.2.3.6: Submission of late requisitions

Figure 5.2.3.6 and the tables above shows responses to the question on whether directorates submit late requisitions. Most, 83.3%, indicated 'yes', while 16.7 % responded 'no'. Late requisitions can result in the receipt of fewer than three quotations. This means there is poor implementation of seven or more working days' policy before SCM's delivery date. Moreover, SCM stakeholders' lack of training (directorates) about SCM legislation and policies can be seen. Jayalath (2016) states that although directorates cannot have in-depth knowledge of SCM, they are responsible for

their requisitioning. Furthermore, they provide support that the SCM component needs to meet the procurement manual's terms with the department and the PFMA.

5.2.3.7 If “yes”, how many days in most cases?

Table 5.2.3.7: Number of days in most cases

If yes, how many days in most cases				
		Frequency	Percent	Valid Percent
Valid	1-3 days	7	58.3%	58.3%
	3-6 days	3	25.0%	25.0%
	6-9 days	1	8.3%	8.3%
	No response	1	8.3%	8.3%
	Total	12	100.0%	100.0%

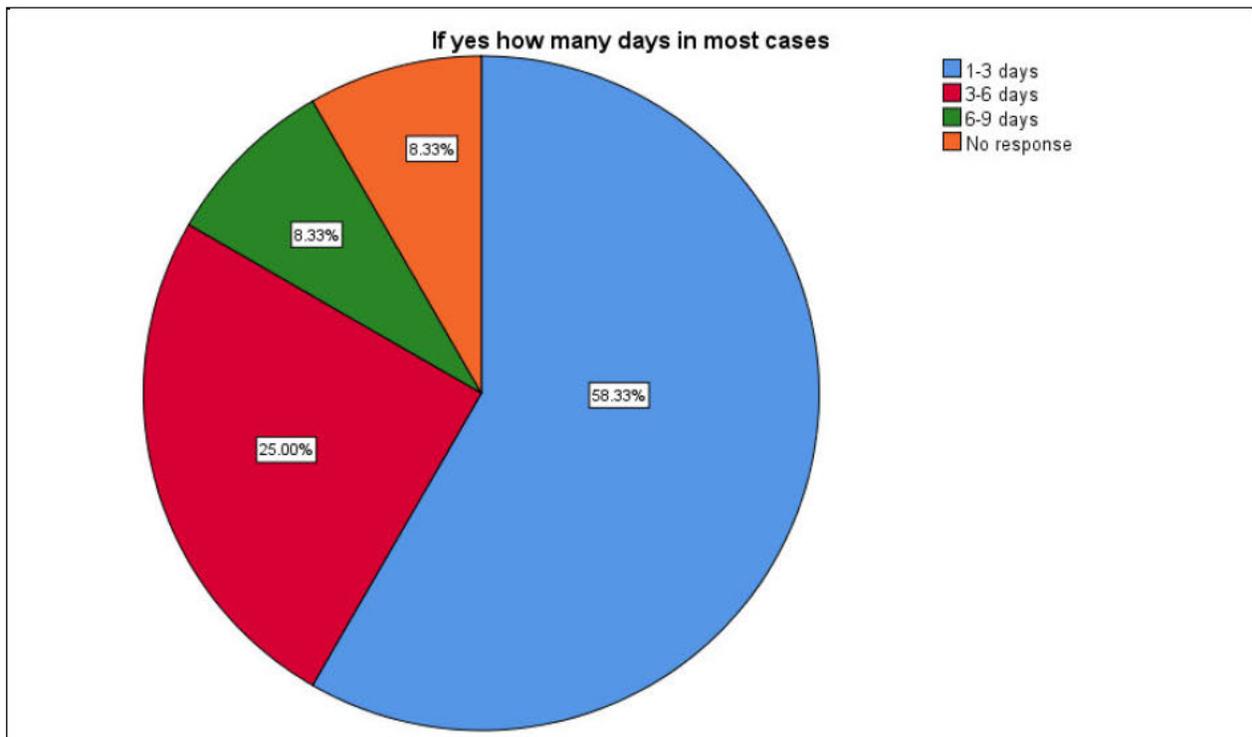


Figure 5.2.3.7: Number of days in most cases

Figure 5.2.3.7 and the table above support table 5.2.3.6. In table 5.2.3.6 and figure 5.2.3.6, respondents were asked to answer if it happened that directorates submitted late requisitions. Most, 83.3%, of respondents selected 'yes'. This is shown in figure 5.2.3.7, where 58.3% of respondents said it happens by 1-3 days, which is the minimum number of days, 25.0% of respondents selected 3-6 days, while 6-9 and missing respondents said 8.3%. According to Selomo and Govender (2016) study that considers the negative factors impacting SCM, one of the significant factors that impede SCM's effectiveness is the last-minute submissions of requisitions by end-user or departmental directorates. This indicates that SCM receives late requisitions, and this could be why suppliers are not given more days to quote.

5.2.3.8 How proposals are solicited

Table 5.2.3.8: Methods to solicit proposals

How proposals are solicited Frequencies				
		Responses		Percent of Cases
		N	Percent	
How proposals are solicited	Quotation method	11	28.9%	91.7%
	Bid method	10	26.3%	83.3%
	state tender bulletin	5	13.2%	41.7%
	E-tender method	5	13.2%	41.7%
	Verbal telephonically	4	10.5%	33.3%
	All above	3	7.9%	25.0%
Total		38	100.0%	316.7%
a. Dichotomy group tabulated at value 1.				

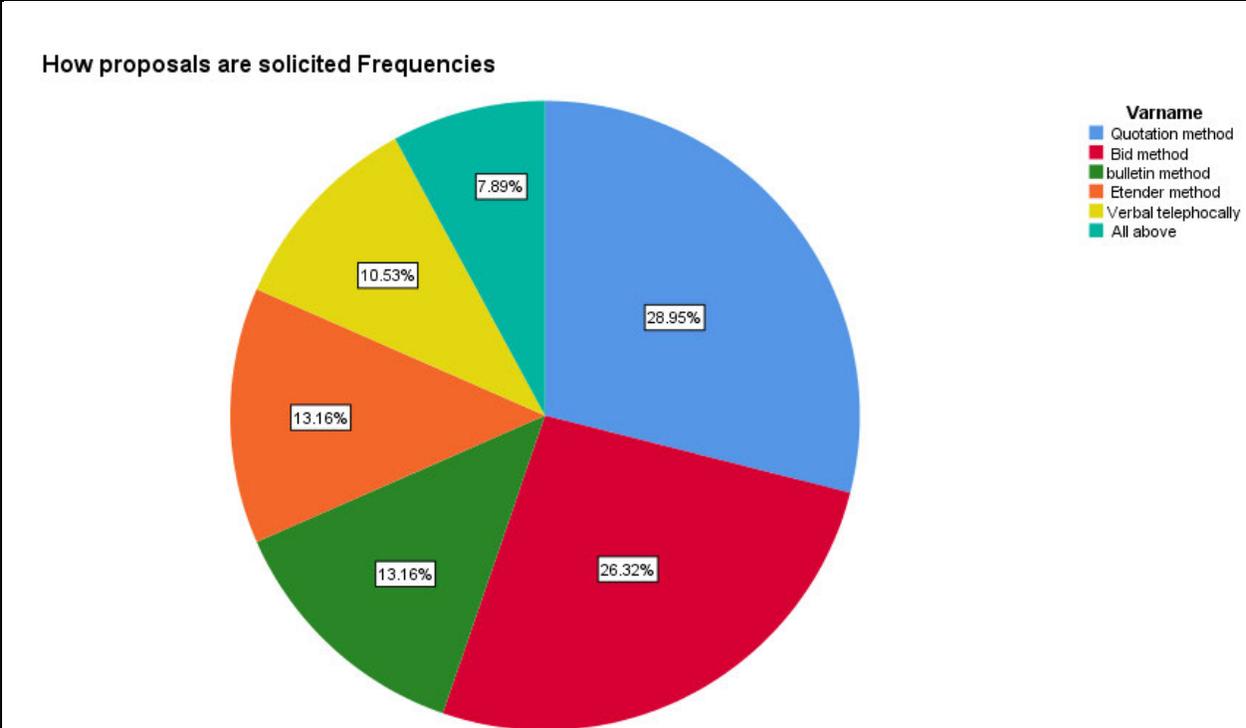


Figure 5.2.3.8: Methods to solicits proposals

As shown in figure 5.2.3.8 and the table above, respondents were asked how the department solicits proposals from potential suppliers, which includes request for quotations, competitive bidding, state tender bulletin, e-tenders, verbally (telephonically), and all of the above. Most (28.9%) of the respondents said through requesting quotations, followed by 26.3% of respondents that said bid method. State tender bulleting and e-tender each show 13.2% of respondents, 10.5% of the respondents said verbally (telephonically), and 7.9% of respondents said all of the above. Based on the above information, it can be concluded the department sources proposals through request for quotation and bidding, and the requesting hardly uses state tender bulletin and e-tender. On the other hand, it can be concluded that few requests are made verbally.

5.2.3.9 How many days the department open invitation quote

Table 5.2.3.9: Number of days the department opens invitation to quote

How many days the department open invitation quote					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 day	1	8.3%	8.3%	8.3%
	2 days	1	8.3%	8.3%	16.7%
	3 days	7	58.3%	58.3%	75.0%
	4 days	1	8.3%	8.3%	83.3%
	5 days	2	16.7%	16.7%	100.0%
	Total	12	100.0%	100.0%	

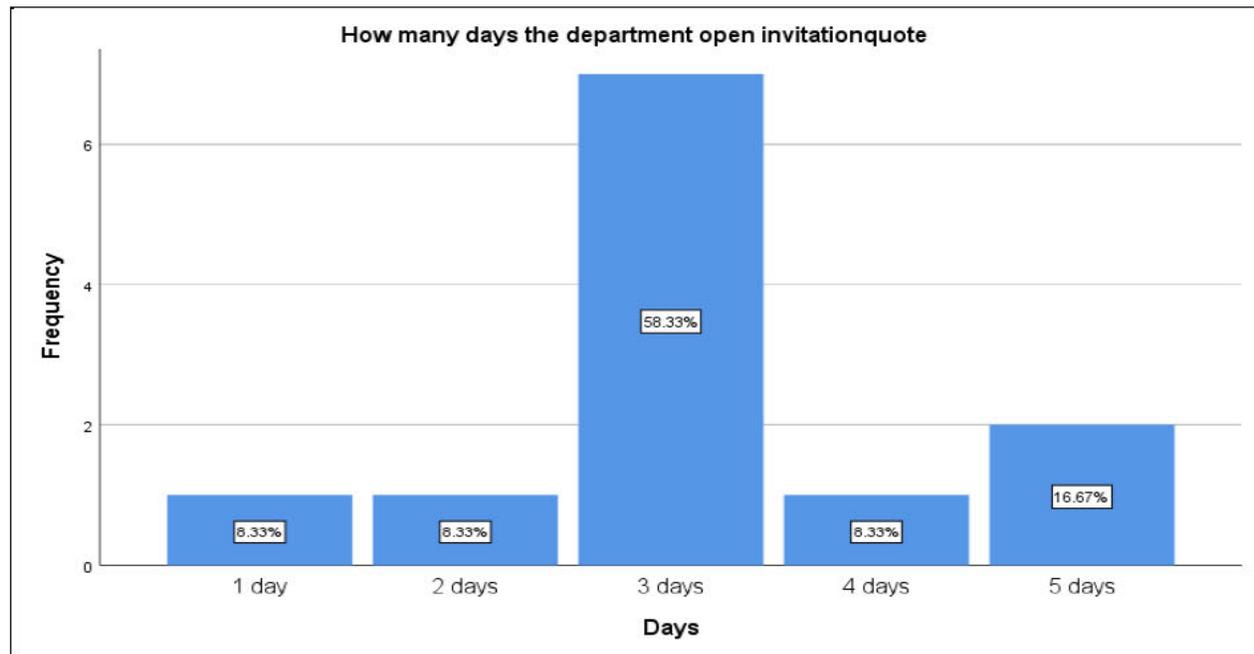


Figure 5.2.3.9: Number of days the department opens invitation to quote

Most of the respondents (58.3%) indicated that the quotation invitation is opened for three days, followed by five days (16.7%), and one day, two days, and four days (8.3% each). More than half believe that quotations are opened for three days, which is the minimum time. However, it would

be ideal for an opening for five days to minimize re-invitation and motivational memo to accept less than three quotes.

5.2.3.10 Methods used to receive quotation

Table 5.2.3.10: Methods used to receive quotation

Methods used to receive quotation Frequencies				
		Responses		Percent of Cases
		N	Percent	
Methods used to receive quotation	Email	12	48.0%	100.0%
	Fax	1	4.0%	8.3%
	Hand delivered	11	44.0%	91.7%
	All of the above methods	1	4.0%	8.3%
Total		25	100.0%	208.3%
a. Dichotomy group tabulated at value 1.				

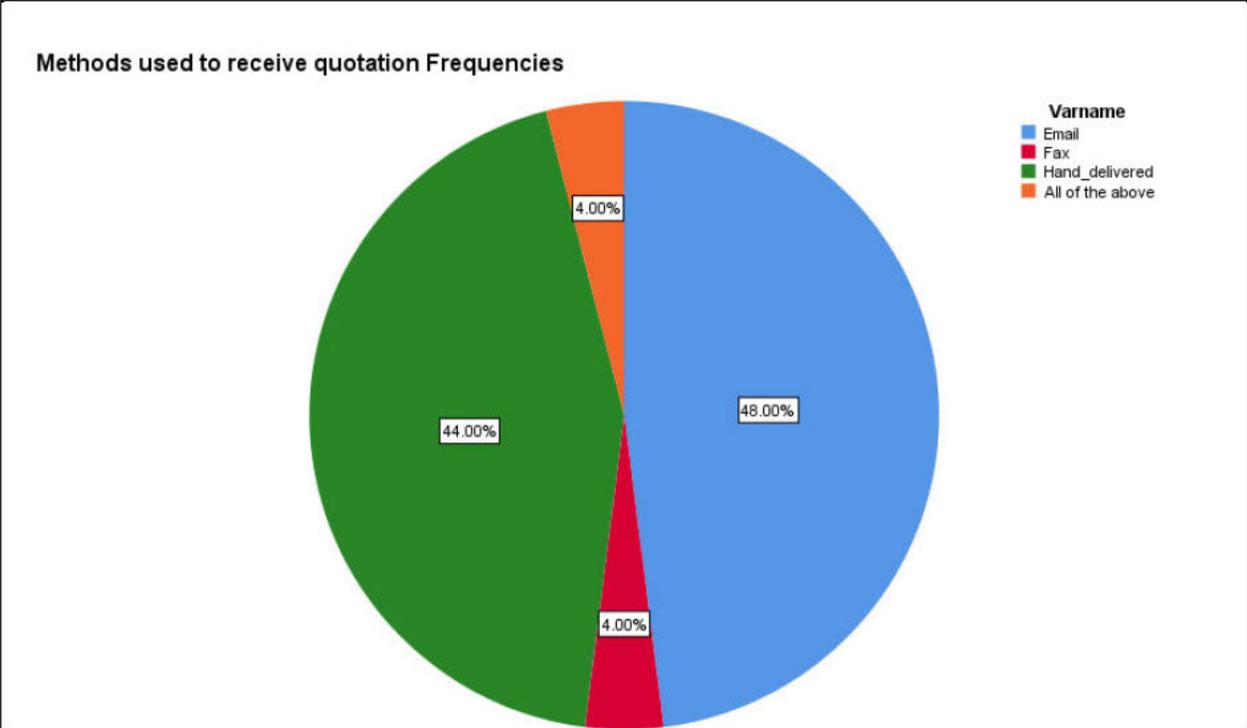


Figure 5.2.3.10: Methods used to receive quotation

Respondents were requested to select which methods are used to receive a quotation after the invitation to submit a proposal is sent to the supplier with the option of three methods (email, fax, hand-delivered) and the fourth option, all of the above. Most (48.0%) said email, followed by hand-delivered (44.0%), and fax and all of the above each at 4.0%. Therefore, it is concluded that email and hand-delivered are mostly used. This can limit suppliers who have faxes at their convenience. It is essential to use more methods as the department can reach suppliers at their convenience.

5.2.3.11 The department considers time and date

Table 5.2.3.11: The department considers time and date

The department consider time and date					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Both	12	100.0%	100.0%	100.0%

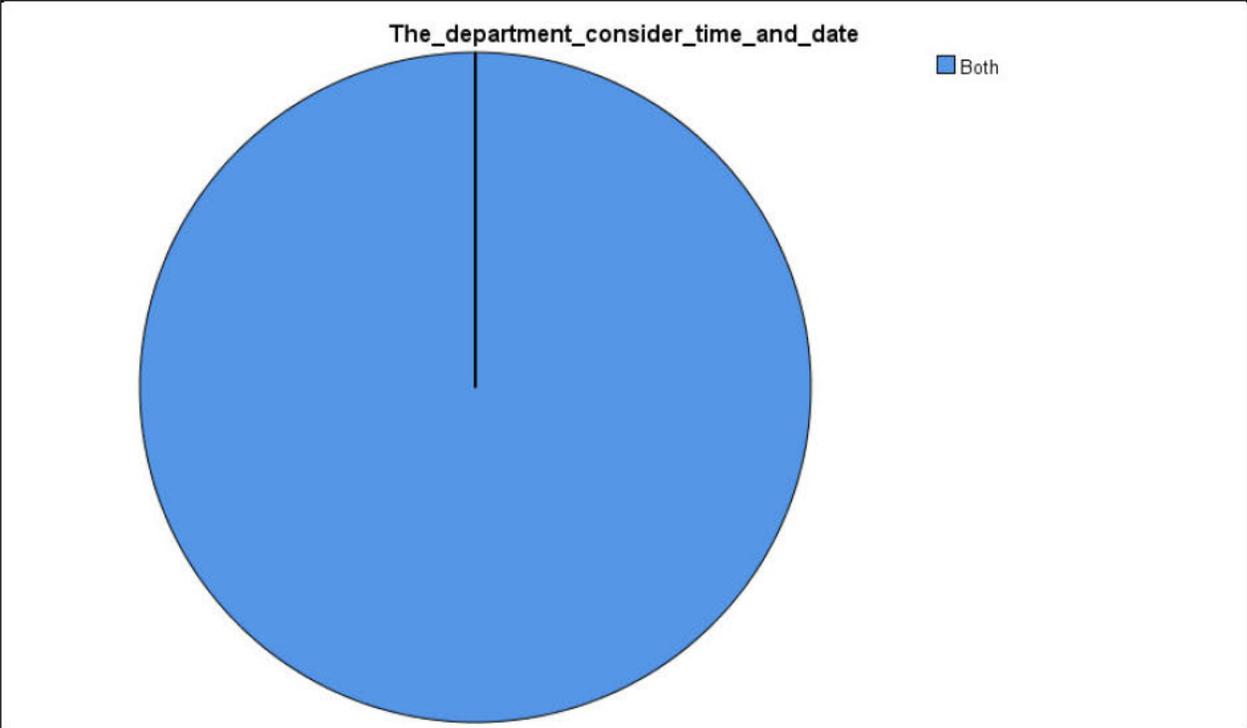


Figure 5.2.3.11: The department considers time and date

Respondents were asked to consider time and date in the receipt of quotations. Figure 5.2.3.11 and the table above shows that a total of 100% indicated that both are considered. The request for proposals (RFP) is approved and publicized on different platforms such as online media and notice boards. Potential bidders are then invited to submit their proposals by a stated closing date and time. All proposals received on time are evaluated and adjudicated to determine the winning supplier (Naidoo et al., 2018).

5.2.3.12 For bids, how many days the department opens invitation

Table 5.2.3.12: Number of days the department opens invitation to bid

For bid how many days the department opens invitation				
		Frequency	Percent	Valid Percent
Valid	1 week	1	8.3%	8.3%
	3 weeks	2	16.7%	16.7%

4 Weeks	3	25.0%	25.0%
More	6	50.0%	50.0%
Total	12	100.0%	100.0%

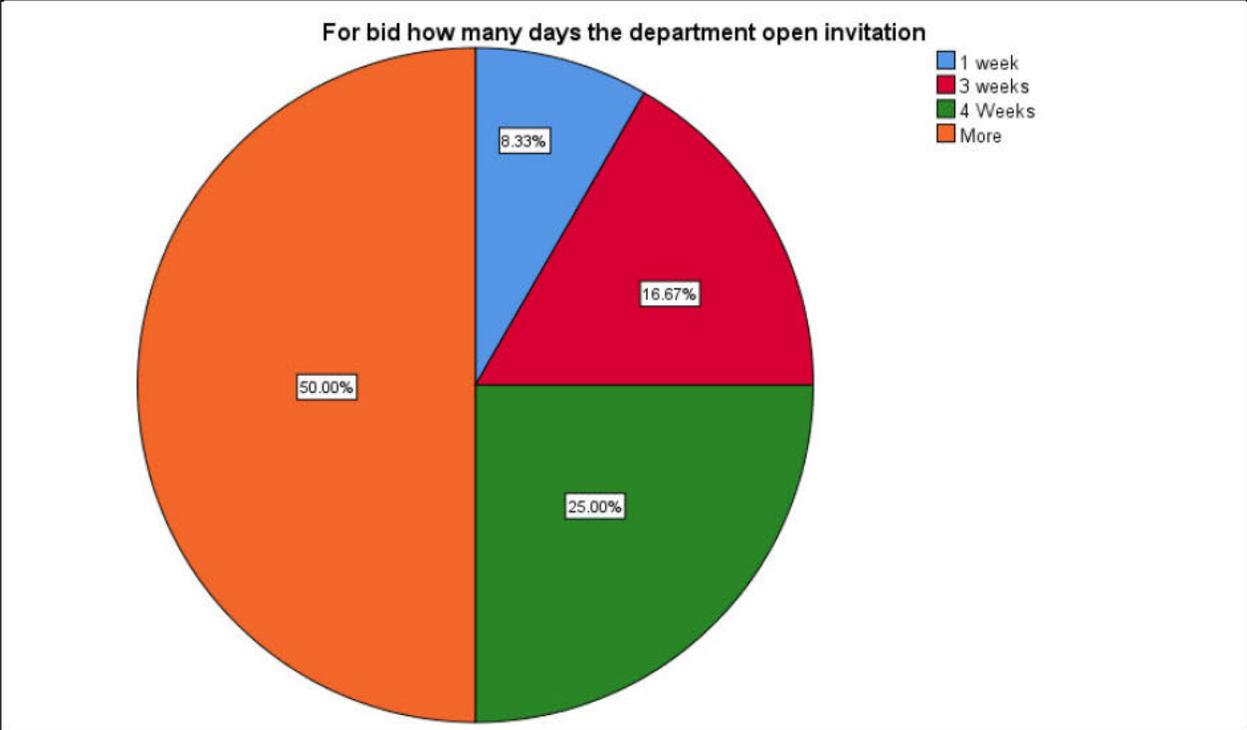


Figure 5.2.3.12: Number of days the department opens invitation to bid

Respondents were requested to indicate how many days SCM opens the invitation to submit a proposal strictly to bids, by selecting from the dropdown list: 1 week, two weeks, three weeks, four weeks a, five weeks, and more. Half (50.0%) selected more weeks, 25.0% four weeks, 16.7% three weeks, and 8.3% selected one week. The tender process must start and finish as soon as possible after the opening and within twenty-one days, as stated by law, and award the contract within the bid validity period. However, the department head can motivate a tender to be advertised less than twenty-one days in the case of an emergency (Okello, 2018). This is also supported by Maleka (2016). This is necessary to ensure potential suppliers are exposed to the advert, except in urgent cases when the bid is advertised for a short period with the Accounting Officer's determination.

5.2.3.13 Does the department promotes locally manufactured goods?

Table 5.2.3.13: Department promotes locally manufactured goods

Does the department promote locally manufactured goods				
		Frequency	Percent	Valid Percent
Valid	Disagree	1	8.3%	8.3%
	Neutral	1	8.3%	8.3%
	Agree	3	25.0%	25.0%
	Strongly agree	7	58.3%	58.3%
	Total	12	100.0%	100.0%

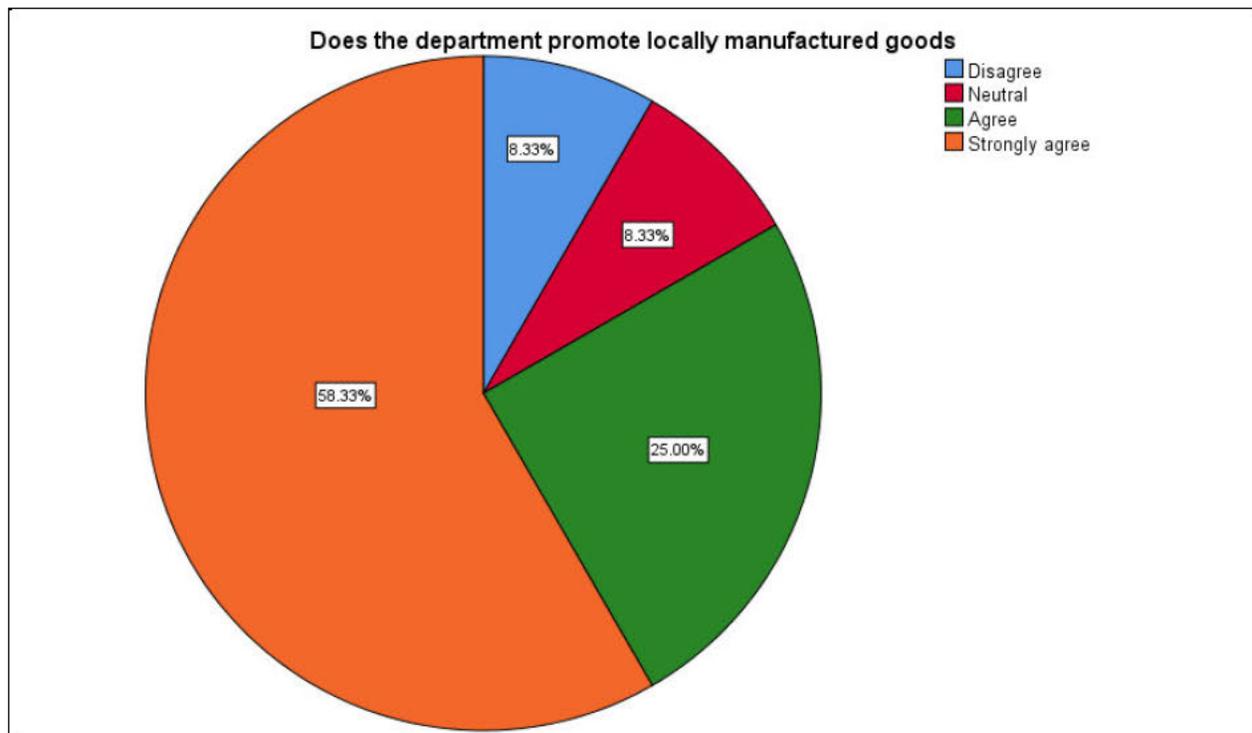


Figure 5.2.3.13: Department promotes locally manufactured goods

Figure 5.2.3.13 and table 5.2.3.13 shows 91.7% responded to this question, with 33.3% indicating they strongly agree that the department promotes locally manufactured goods, 25.0% strongly disagree, 16.7% agree, 8.3% disagree, and 8.3% indicated neutral. The majority of respondents believe that the department promotes locally manufactured goods. This means the local content promoted by the national department of trade and industry is implemented.

According to paragraph 9(1) of Portfolio Committee on Trade and Industry of 2 March 2016: Department of Trade and Industry is empowered to designate certain industries where bid documents should prescribe that only locally manufactured goods with a stated minimum threshold for local production will be regarded as received.

Moreover, the Preferential Procurement Regulations (2011) is a political agreement that aims for at least 70% of goods and services to be locally manufactured by the year 2020. This regulation links public procurement with economic and social issues in South Africa. In December, Section 9 of the PPPFA Regulations was amended to contain local production and content ambitions. The new regulations provide new sectors and subsectors for national, provincial, and local government as well as the SOE's to procure locally (Ambe, 2016d).

5.2.3.14 Bid process is done by bid committee and who does final award

Table 5.2.3.14: Bid process is done by bid committee and who does final award

Bid process is done by bid committee and who does final award					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	BAC	10	83.3%	83.3%	83.3%
	CFO	2	16.7%	16.7%	100.0%
	Total	12	100.0%	100.0%	

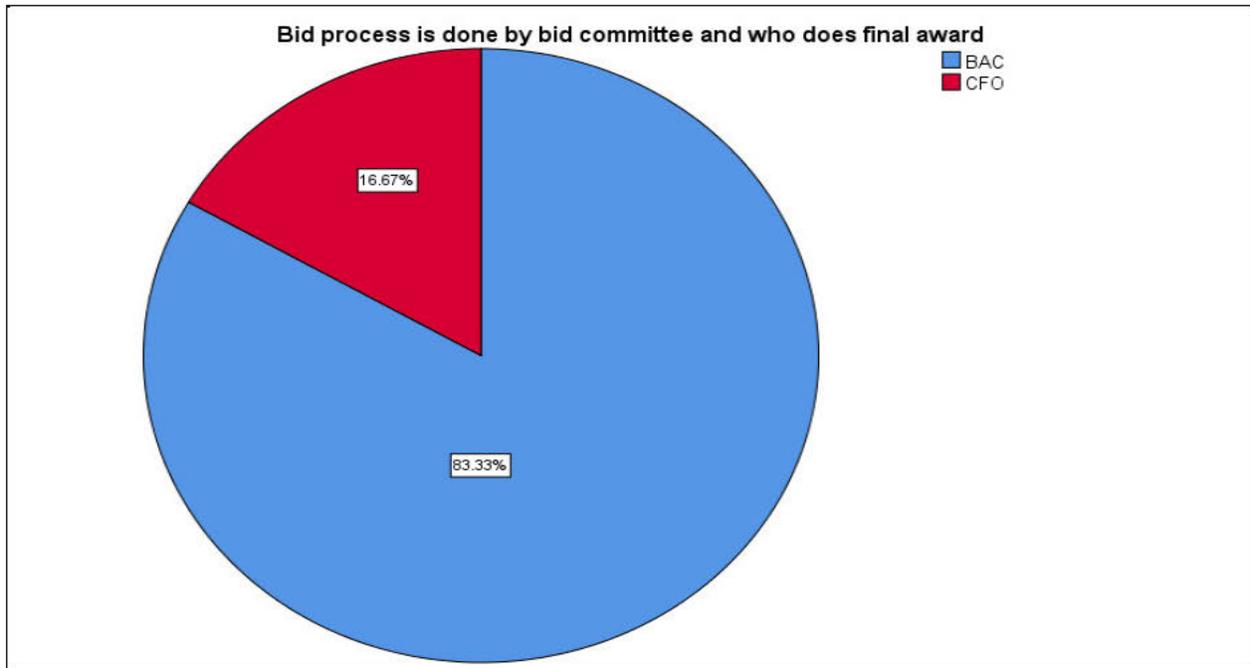


Figure 5.2.3.14: Bid process is done by bid committee and who does final award

Figure 5.2.3.14 and the table 5.2.3.14 show the majority (83.3%) of respondents confirmed that the bid committee does the bid process, and the BAC committee finalizes the award. A total of 16.7% said CFO does the final award. According to Matemotsa (2018), the BAC must consider the report and recommendations made by BEC. The BAC can make a final award or recommend that the Accounting Officer (AO) does a final award or compile another recommendation to the AO on how to carry on with the relevant procurement.

5.2.3.15 Does the department have an assets and disposal committee?

Table 5.2.3.15: Does the department have an assets and disposal committee

Does the department have an assets and disposal committee					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	75.0%	75.0%	75.0%
	No	1	8.3%	8.3%	83.3%
	Not sure	2	16.7%	16.7%	100.0%

	Total	12	100.0%	100.0%	
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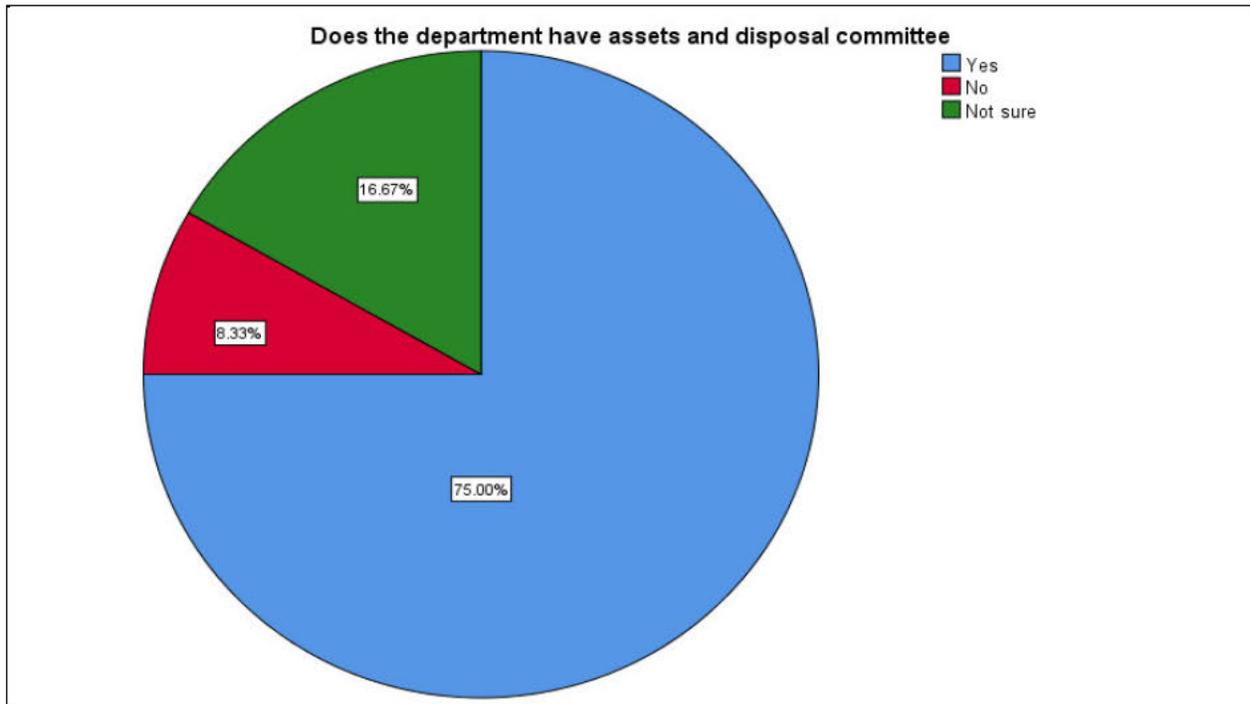


Figure 5.2.3.15: Does the department have an assets and disposal committee

Figure 5.2.3.15 and the tables above shows the majority (75.0 %) of respondents said yes, the department has an assets and disposal committee while only 8.3% indicated no. A total of 16.7% were not sure. Mokotedi (2016) asserts that to ensure fair disposal processes and strategic decisions, the disposal process should not rely on a specific individual. The disposal process should be systematic, with the committee in place.

5.2.3.16 Does it happen that the department loses assets?

Table 5.2.3.16: Does it happen that the department loses assets

Does it happen that the department loses assets					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	58.3%	58.3%	58.3%

No	1	8.3%	8.3%	66.7%
Not sure	4	33.3%	33.3%	100.0%
Total	12	100.0%	100.0%	

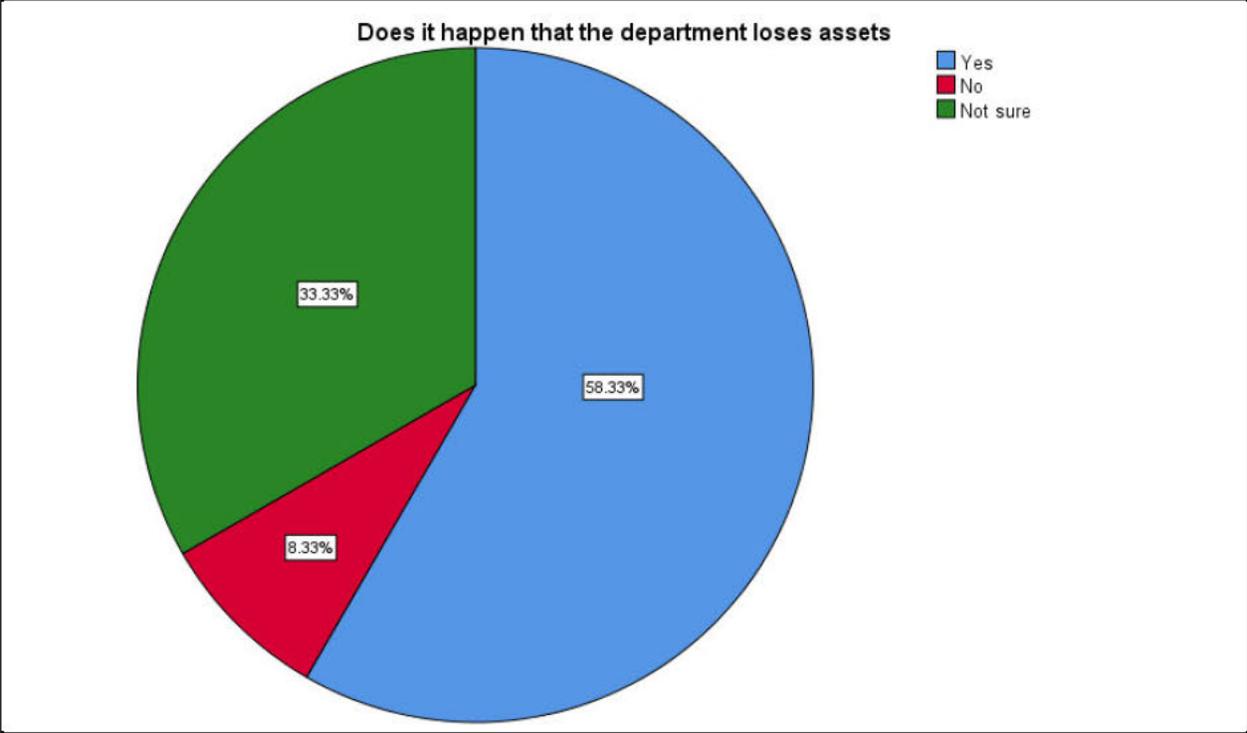


Figure 5.2.3.16: Does it happen that the department loses assets

More than half (58.3%) of respondents believe that it happens that the department loses assets, 8.3% said no, and 33.3% remained unsure or yes and no. The accounting authority, along with others, should ensure that preventative measures to eliminate theft, loss, and misuse of assets are in place. All this can be achieved by ensuring the damage and loss of assets are reported according to Treasury Regulation 12. Moreover, investigations must be conducted regarding damaged and lost assets to see if they can potentially be recovered, while the surplus is recorded on the assets register immediately (Maleka, 2016).

5.2.3.17 Methods used to dispose assets

Table 5.2.3.17: Methods used to dispose assets

Methods used to dispose assets Frequencies				
		Responses		Percent of Cases
		N	Percent	
Methods used to dispose assets	Donation	10	37.0%	83.3%
	Scrub yards	3	11.1%	25.0%
	Staff sales	2	7.4%	16.7%
	Auction	12	44.4%	100.0%
Total		27	100.0%	225.0%
a. Dichotomy group tabulated at value 1.				

Respondents were requested to select which methods (donation, scrub yards, staff sales, and auction) are used by the department to dispose of assets. Table 5.2.3.17b shows that a total of 44.4% selected auction, 37.0% selected donation, and 11.1% selected scrub yards, and 7.4% indicated staff sales. According to the National Treasury’s SCM for an Accounting Officer, disposal is the last stage, where an organization needs to let go of movable assets, including redundant or obsolete and unserviceable assets. It requires determining disposal strategies and methods of implementation (Ngobeni, 2016). Disposal management also dictates that the movable assets can be traded either through written price quotations, competitive bidding, and auction or market-related price (Matolong, 2015). This is supported by Nkwanyana (2018) and who further states that assets can be disposed of using destruction and sales to staff.

5.2.3.18 Are there any strategies used to measure SCM performance?

Table 5.2.3.18: Strategies used to measure SCM performance

Are there any strategies used to measure SCM performance				
		Frequency	Percent	Valid Percent
Valid	Yes	11	91.7%	91.7%
	No response	1	8.3%	8.3%
	Total	12	100.0%	100.0%

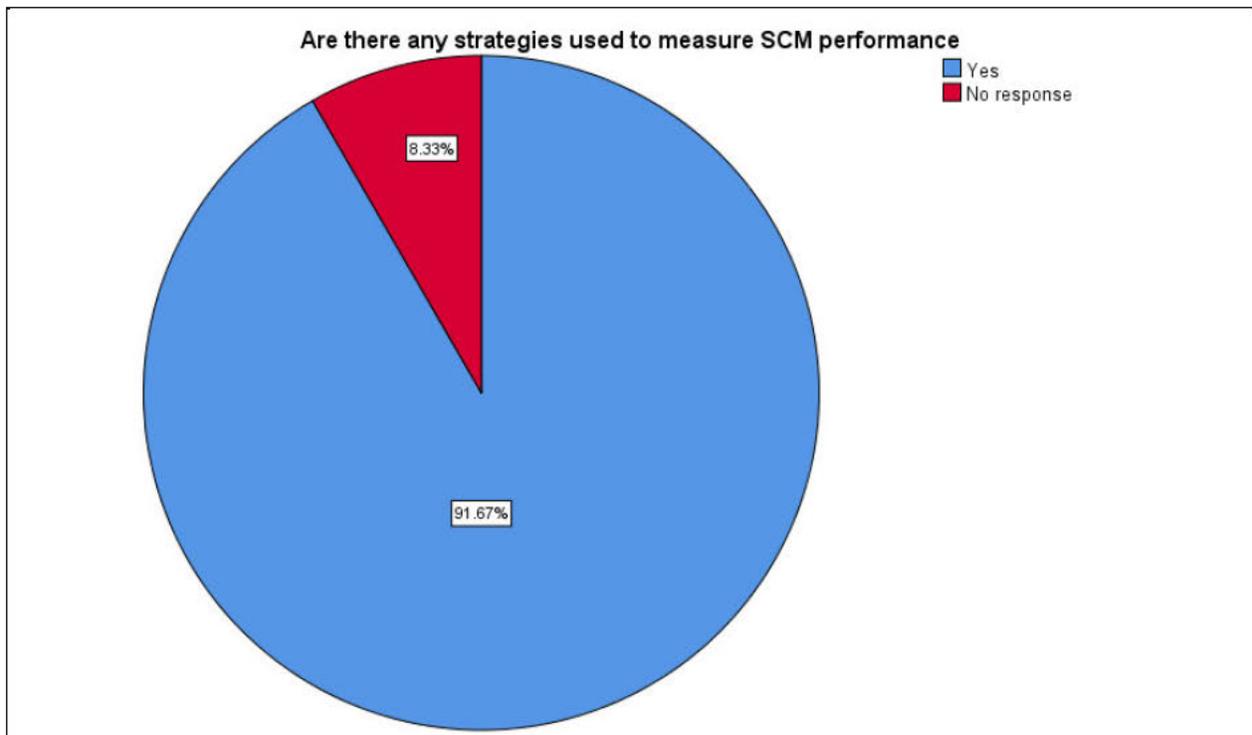


Figure 5.2.3.18: Strategies used to measure SCM performance

Table 5.2.3.18 and Figure 5.2.3.18 shows that 91.7% of the respondents said yes to whether there are any strategies used to measure SCM performance, while (8.3%) had no response to the question. Performance management is used to carry out ex-post factor analysis to determine

whether expected processes have been followed and the desired results were achieved. Furthermore, performance management and evaluation of suppliers are essential for managing the supplier's relationship (Ngxesha, 2015). Every SCM system should be designed to support internal monitoring to set up the foundation of reviewing the analysis, to check if all procedures are being adhered to and whether the stated objective is achieved.

5.2.3.19 Normal contract duration

Table 5.2.3.19b: Normal contract duration

Normal contract duration Frequencies				
		Responses		Percent of Cases
		N	Percent	
Normal contract duration	Six months	3	14.3%	25.0%
	One year	2	9.5%	16.7%
	Two years	2	9.5%	16.7%
	Three years	10	47.6%	83.3%
	Four years	2	9.5%	16.7%
	Five years	2	9.5%	16.7%
Total		21	100.0%	175.0%
a. Dichotomy group tabulated at value 1.				

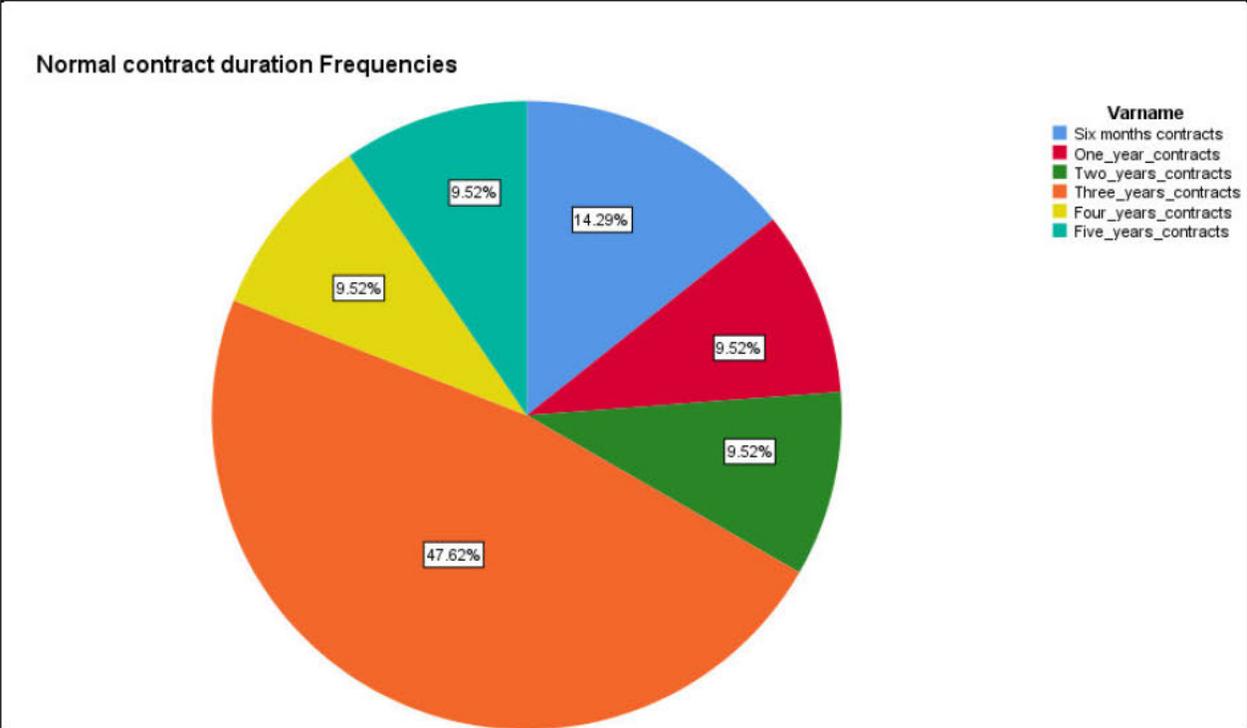


Figure 5.2.3.19: Normal contract duration

Respondents were requested to indicate the standard contract duration: six months, one year, two years, three years, four years, and five years. Some respondents selected more than one option, with comments that it depends on the service required. The highest number but less than half of respondents said three years (47.6%), while 14.3% said six months, one year, two years, and four years, and 9.5% of respondents said five years.

5.2.3.20 Over the past years, which year the department got clean audit?

Table 5.2.3.20: Over the past years, which year did the department get a clean audit?

Over the past years, which year did the department get a clean audit?				
		Frequency	Percent	Valid Percent
Valid	2014	1	8.3%	8.3%
	2017	1	8.3%	8.3%
	2018	1	8.3%	8.3%

No response	9	75.0%	75.0%
Total	12	100.0%	100.0%

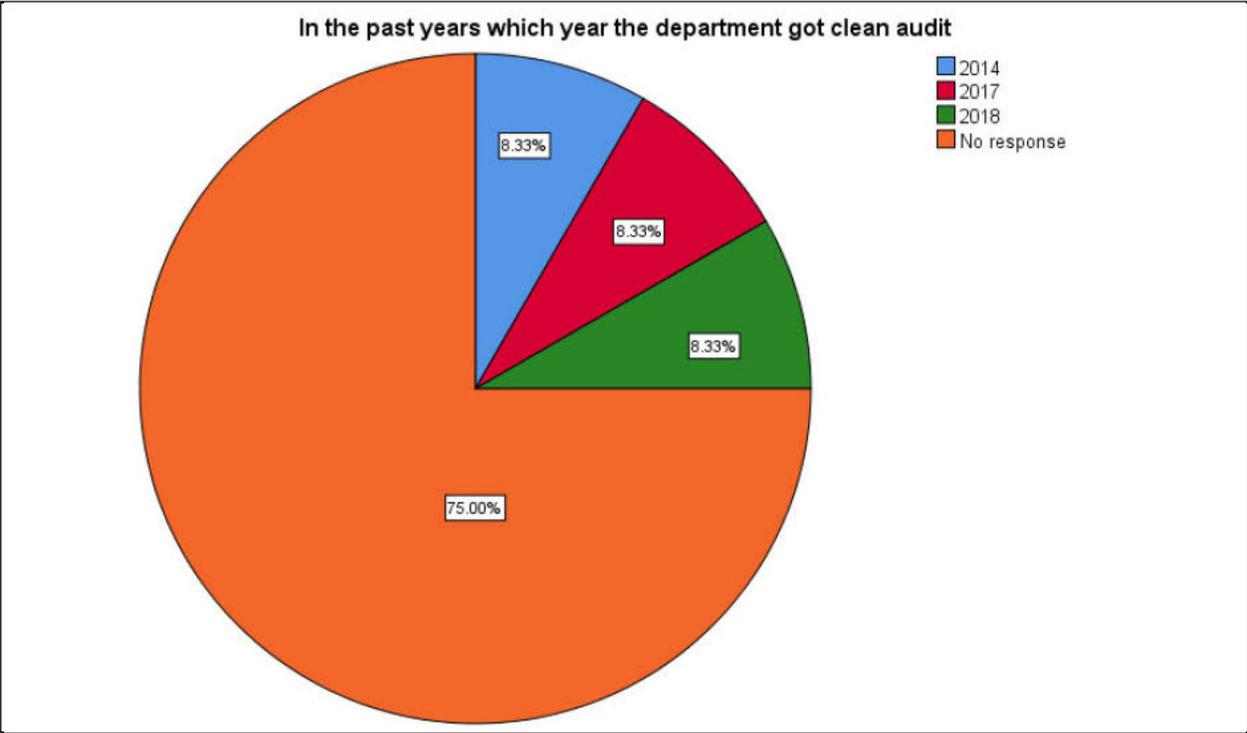


Figure 5.2.3.20: Over the past years, which year did the department get a clean audit?

Table 5.2.3.20 and Figure 5.2.3.20 shows that 25.0% of respondents responded to this question. A total of 8.3. % of respondents said the department received a clean audit in 2014, 2017, and 2018. From the above information, it can be concluded there is a lack of information being circulated as 75.0% had no response. This indicates that information is not circulated; at least those who have been in the department for one year should know the last time there was a clean audit. Every official in SCM must understand where the directorate was, is, and wants to be. This might cause SCM officials not to see what is needed to do well, as the results are not communicated often, as the response level in this question indicates.

According to Section 38 (1) (c) (ii) of the PFMA, the Accounting Officer should establish measures that will prevent irregular expenditure. Under normal conditions, these measures will identify irregular expenditures for the department to disclose an irregular expenditure register and

report before the audit process (Dlomo, 2017). For instance, only 8.3% of the respondents believed that a clean audit was received for each of the years indicated. However, 75.0% of the respondents did not answer the question.

5.2.3.21 How many times verification of assets is done a year

Table 5.2.3.21: How many times verification of assets is done a year

How many times verification of assets is done a year					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 times a year	9	75.0%	75.0%	75.0%
	4 times a year	3	25.0%	25.0%	100.0%
	Total	12	100.0%	100.0%	

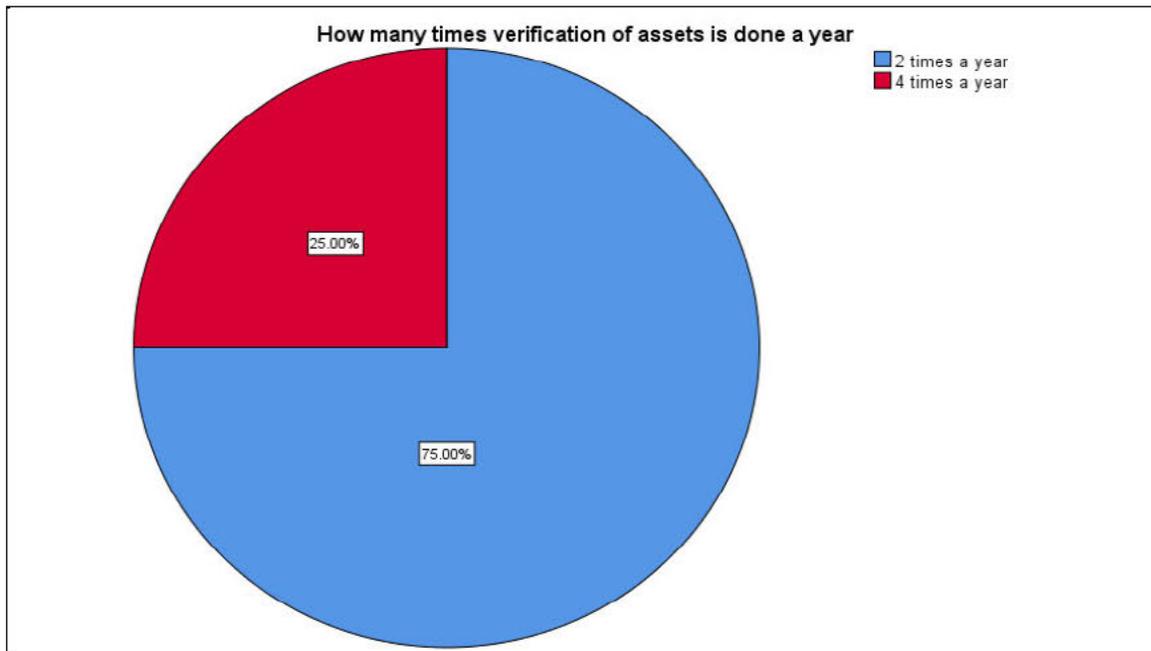


Figure 5.2.3.21: How many times verification of assets is done a year

Respondents were requested to indicate how many times assets verification is done in one year. Figure 5.2.3.21 and table 5.2.3.21 shows that 75.0% of respondents said two times, and 25.0% said four times a year. According to Ouda (2016), restoration of physical records of long-standing

assets in the public sector was neglected; it is an overwhelming and pricey task that is a significant obstacle to any proposal to extend asset recognition. Thus, the lack of accurate, relevant, and detailed information about the governmental capital assets can be regarded as an obstruction to the execution of good governance.

5.2.3.22 Do you think SCM is achieving its pillars?

Table 5.2.3.22: SCM is achieving its pillars

Do you think SCM is fulfilling requirements of the pillars?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	11	91.7%	91.7%	91.7%
	Not sure	1	8.3%	8.3%	100.0%
	Total	12	100.0%	100.0%	

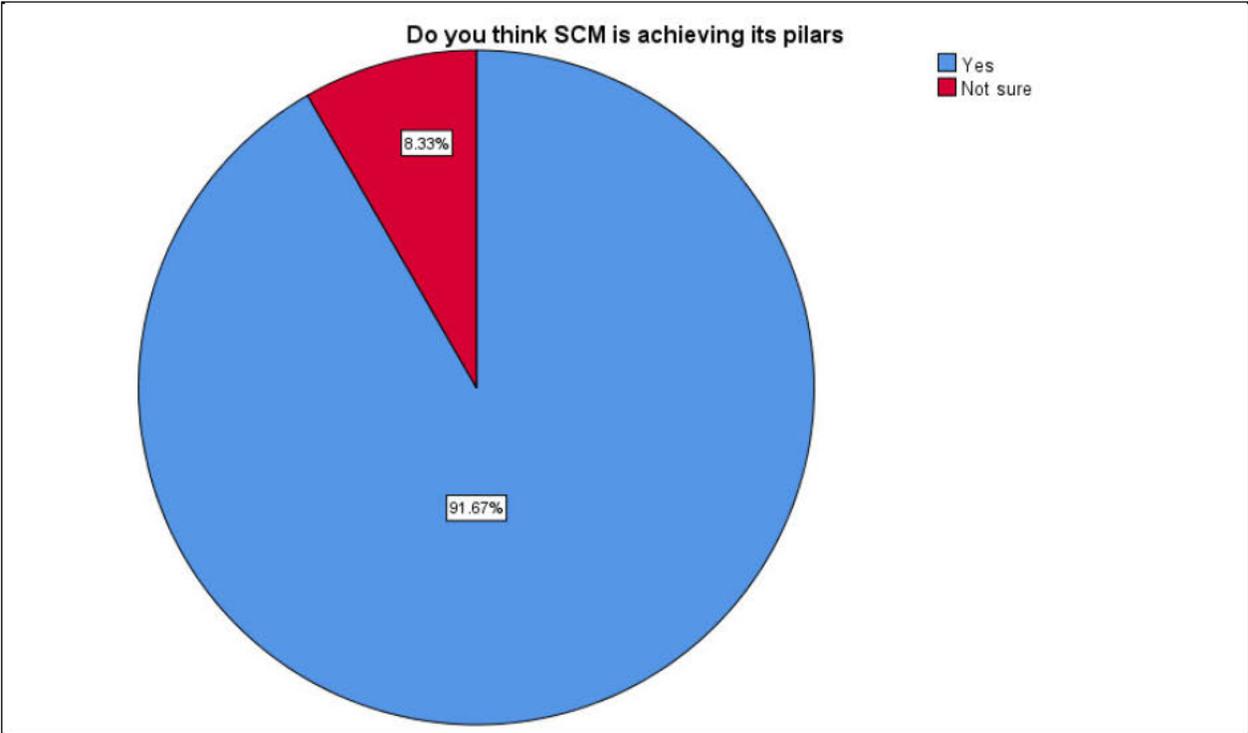


Figure 5.2.3.22: SCM is achieving its pillars

As figure 5.2.3.22 and the table above indicate, 91.7% believe that the pillars are being achieved, while 8.3% remained unsure. Zitha et al. (2016) state that the pillars (value for money, openness and transparency, ethics and fair dealings, accountability and reporting, and equity) of SC form the foundation for compliance to procurement processes by SCM officials. Furthermore, it is essential to emphasize why they are viewed as pillars; if any one of these collapses, the procurement systems will fail and affect service delivery.

5.2.3.23 Do you think SCM achieves its role according to the frameworks?

Table 5.2.3.23: SCM achieves its role according to the legislative frameworks

Do you think SCM achieves its role according to the legislative frameworks				
		Frequency	Percent	Valid Percent
Valid	Yes	10	83.3%	83.3%
	No	1	8.3%	8.3%
	No response	1	8.3%	8.3%
	Total	12	100.0%	100.0%

The majority (83.3%) of the respondents believe that SCM achieves its role according to the stated frameworks, 8.3% indicated no, while 8.3% did not respond.

South African National Treasury provides guidelines for implementation of the SCM policy. Policies and legislations guide the SCM process. The framework constitutes the elements of the SCM. SC is there to achieve SCM pillars such as value for money, open and effective competition, ethics and fair dealings, accountability and reporting, and equity. By complying with these pillars, SCM will achieve crucial goals of standardization in procurement, economic development, and good governance (Mabanga, 2018).

5.2.3.24 When SCM Legislation and prescripts are changing, do you get informed?

Table 5.2.3.24: When SCM Legislation and prescripts are changing, do you get informed?

When SCM Legislation and prescripts are changing, do you get informed?				
		Frequency	Percent	Valid Percent
Valid	Yes	8	66.7%	66.7%
	No	3	25.0%	25.0%
	No response	1	8.3%	8.3%
	Total	12	100.0%	100.0%

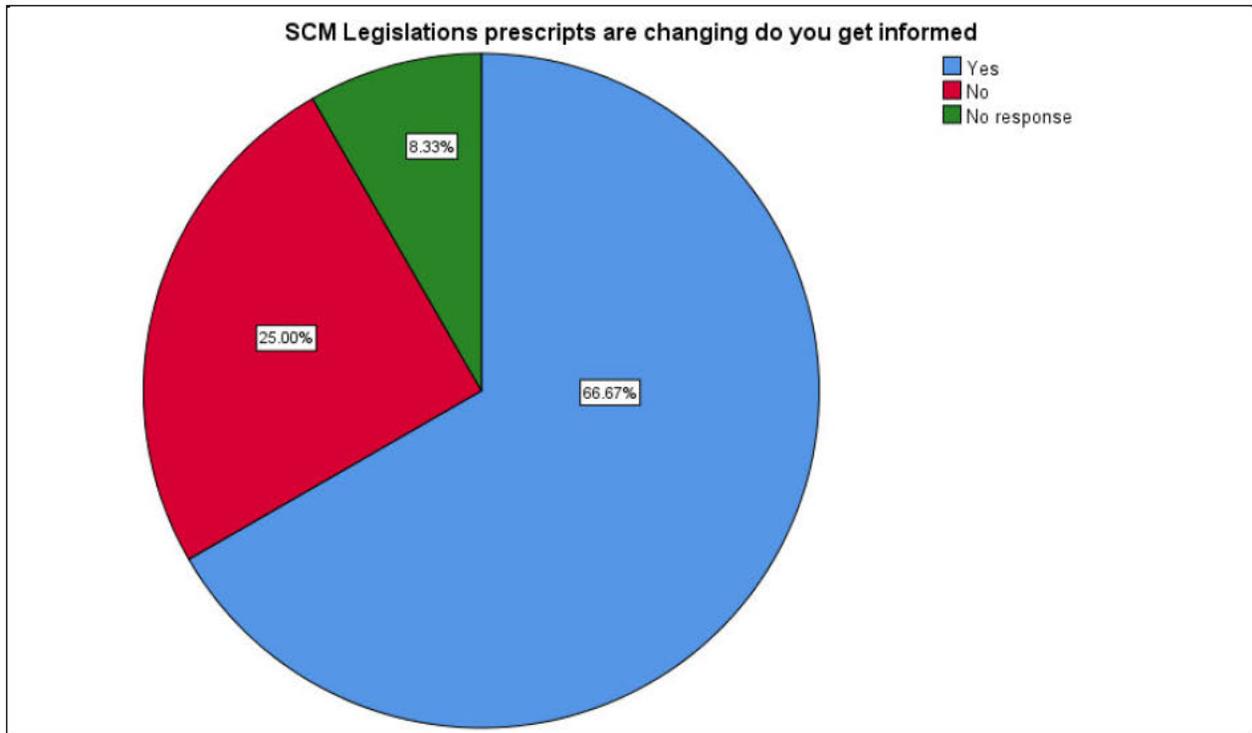


Figure 5.2.3.24: When SCM Legislation and prescripts are changing, do you get informed?

Due to the frequently changing SCM legislation and prescripts, respondents were requested to respond if they are informed by management on any changes of the legislation or prescripts. Most (66.7%) responded as yes, they do get informed, 25.0% said no, and 8.3% did not respond to this question. South African public sectors are facing a problem of rapid changes in public procurement requirements. The changes affect internal and external functions and processes and procedures to achieve the objective.

Mazibuko (2018) supports this by stating that the lack of communication of new and amended policies and legislation affects auditor results in a crisis. Furthermore, Mazibuko (2018) states that in any industry, the data and reports that show compliance to regulatory needs must have authority and come from a trustworthy source.

5.2.3.25 Is the SCM of the department responsible for supplier payments?

Table 5.2.3.25: Is the SCM of the department responsible for supplier payments

Is the SCM of the department responsible for supplier payments				
		Frequency	Percent	Valid Percent
Valid	Yes	5	41.7%	41.7%
	No	7	58.3%	58.3%
	Total	12	100.0%	100.0%

More than half (58.33%) of the respondents believe that SCM is not responsible for the supplier's payments; 41.7% believe that SCM is responsible for checking if all suppliers' payments' are processed as they are invited by SCM to quote on a bid. The South African government is faithful to pay suppliers within 30 days where public reform procurements are essential in managing government assets, reducing dishonesty in procurement and payment arrangements.

5.2.3.26 How would you categorize the effectiveness of each process?

In this question, the aim was to establish effectiveness in the process of SCM with EDTEA. The following are the elements of SCM and the findings:

Table 5.2.3.26: Effectiveness of each SCM process

Elements and the categories		Count	Column Valid N %
Demand management	Very poor	1	8.3%
	Poor	1	8.3%
	Good	4	33.3%
	Very Good	6	50.0%
	Not categorized	0	0.0%
Acquisition management	Very poor	1	8.3%
	Poor	0	0.0%
	Good	5	41.7%
	Very good	6	50.0%
	Not categorized	0	0.0%
Logistic management	Very poor	1	8.3%
	Poor	0	0.0%
	Good	5	41.7%
	Very good	6	50.0%
	Not categorized	0	0.0%
Disposal and assets management	Very poor	1	8.3%
	Poor	0	0.0%
	Good	5	41.7%
	Very good	5	41.7%
	Not categorized	1	8.3%
Risk management	Very poor	1	8.3%
	Poor	0	0.0%
	Good	1	8.3%
	Very good	4	33.3%
	Not categorized	6	50.0%
Performance management	Very poor	1	8.3%
	Poor	1	8.3%
	Good	2	16.7%
	Very good	2	16.7%
	Not categorized	6	50.0%

Respondents were requested to categorize SCM processes from very poor, poor, good, and very good. Table 5.2.3.26 shows that 50.0% of respondents categorized demand management as very good, followed by 33.3% as good, and 8.3% each indicating very poor and poor.

All respondents categorized acquisition management. Half the respondents (50.0%) categorized acquisition management as very good, 41.7% categorized it as good, while only 8.3% said very poor, and 0% of respondents said poor.

All respondents categorized logistic management. Half the respondents (50.0%) categorized logistics management as very good, 41.7% categorized it as good, while only 8.3% said very poor, and 0% of respondents said poor.

Disposal and assets management were categorized as very good and good by 41.7% of respondents, 8.3% of respondents categorized it as very poor, 8.3% did not categorize it, while 0.0% indicated poor.

The majority of respondents (50.0%) did not categorize risk management, 33.3% categorized risk as very good, 8.3% categorized it as good, 8.3% categorized it as very poor, and 0.0% responded poor.

A total of 50.0% of respondents did not categorize performance management, 16.7% categorized performance management as very good and good, and only 8.3% categorized it as very poor and poor.

5.2.3.27 Do you think SCM processes need to be improved?

Table 5.2.3.27: Do you think SCM processes need to be improved?

Do you think SCM processes need to be improved?				
		Frequency	Percent	Valid Percent
Valid	Yes	9	75.0%	75.0%
	Not sure	3	25.0%	25.0%
	Total	12	100.0%	100.0%

Studies have found that public sector SC is vulnerable to irregularities due to weak spots in the SCM framework. The application of elements of the framework must be applied according to the objectives of Section 217(1) of the Constitution, which requires that goods and services should be procured in a manner that is fair, transparent, equitable, competitive, and cost-effective (Matolong, 2015). Table 5.2.3.27 shows that most of the respondents (75.0%) believed that, yes, SCM processes need to be improved. However, 25.0 % of respondents remained not sure, saying either yes or no. Therefore, it can be concluded that SCM sections are implementing their processes at an average level, but there is still a need to improve or change operating ways.

5.2.3.28 Which section needs improvement?

Table 5.2.3.28: Which section needs improvement?

Which section needs improvement Frequencies				
		Responses		Percent of Cases
		N	Percent	
Which section needs improvement	Demand management	6	22.2%	50.0%
	Acquisition management	7	25.9%	58.3%
	Logistics management	5	18.5%	41.7%
	Assets and disposal management	3	11.1%	25.0%
	Risk management	2	7.4%	16.7%
	Contract and performance	4	14.8%	33.3%
Total		27	100.0%	225.0%
a. Dichotomy group tabulated at value 1.				

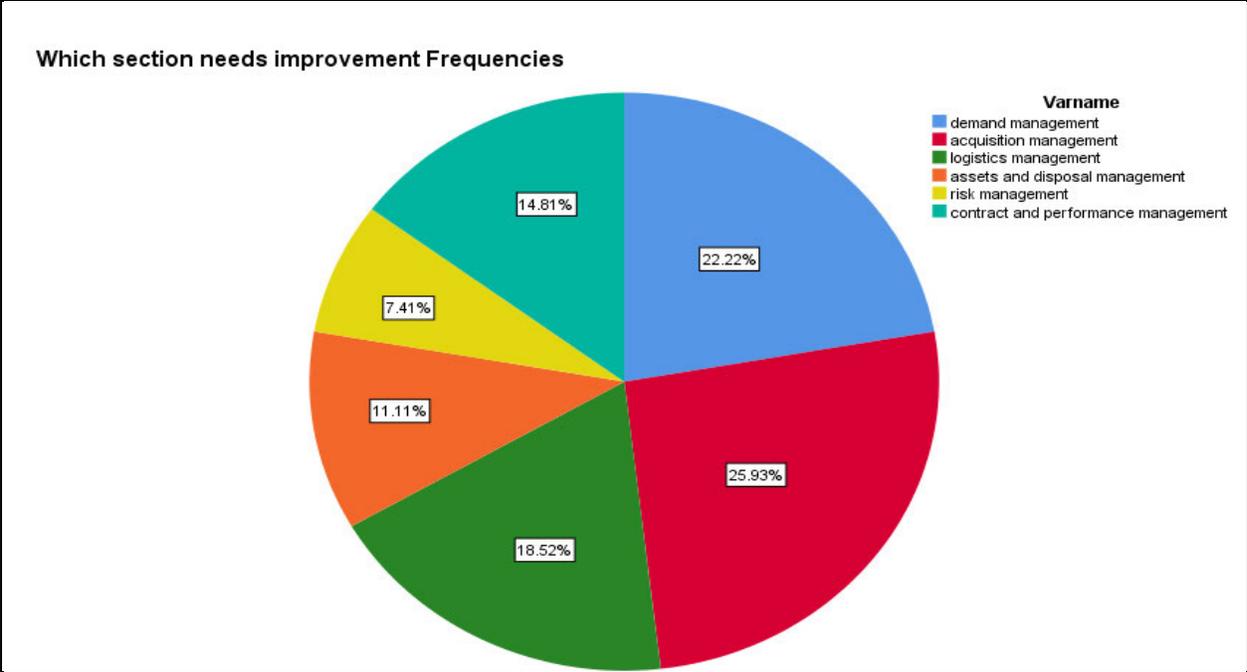


Figure 5.2.3.28: Which section needs improvement?

Recall that table 5.2.3.27 and figure 5.2.3.27 shows respondents’ answers on whether there is a need to improve SCM processes; 75.0% said yes, SCM processes need improvement, while 25.0% were not sure. Figure 5.2.3.28 specifies which sections of SCM need to be improved. The figure above shows that 25.9% believe acquisition needs improvement, 22.2% indicated demand management, 18.5% said logistics management, 14.8% said contract and performance management, and 11.1% said assets and disposal management, while 7.4% said risk management needs improvement. Supply chain management needs to identify sections of the procurement process which will improve its performance to match its stated objectives. However, improving SCM performance per unit requires many things, including learning from the client’s perspective and learning from experienced stakeholders (Saad, 2018).

5.2.3.29 Women, physically challenged, and BBBEE are empowered

Table 5.2.3.29: Women, physically challenged, and BBBEE are empowered

Women and physically challenged and BBBEE are empowered			
	Frequency	Percent	Valid Percent

Valid	Neutral	2	16.7%	16.7%
	Agree	5	41.7%	41.7%
	Strongly agree	5	41.7%	41.7%
	Total	12	100.0%	100.0%

Respondents were requested to indicate strongly disagree, disagree, neutral, agree and strongly agree to the following statement: Women, physically challenged and BBBEE are empowered. Table 5.2.3.29 shows a total of 41.7% strongly agree, 41.7% agree, and 16.7 were neutral, neither agree nor disagree or neither strongly agree nor strongly disagree. Ngxesha (2015) states that BBBEE policy an economic policy, focusing on addressing social and developmental problems which originated from the apartheid era and racial capitalism.

SCM Committees

The Accounting Officer (AO) of an institution must appoint the SCM bid committees, such as the Bid Specification Committee (BSC), Bid Evaluation Committee (BEC), and Bid Adjudication Committee (BAC) to execute various functions within SCM (Mabanga, 2018).

5.2.3.30 Does the department have BSC?

Table 5.2.3.30: Does the department have BSC

Does the department have BSC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	100.0%	100.0%	100.0%

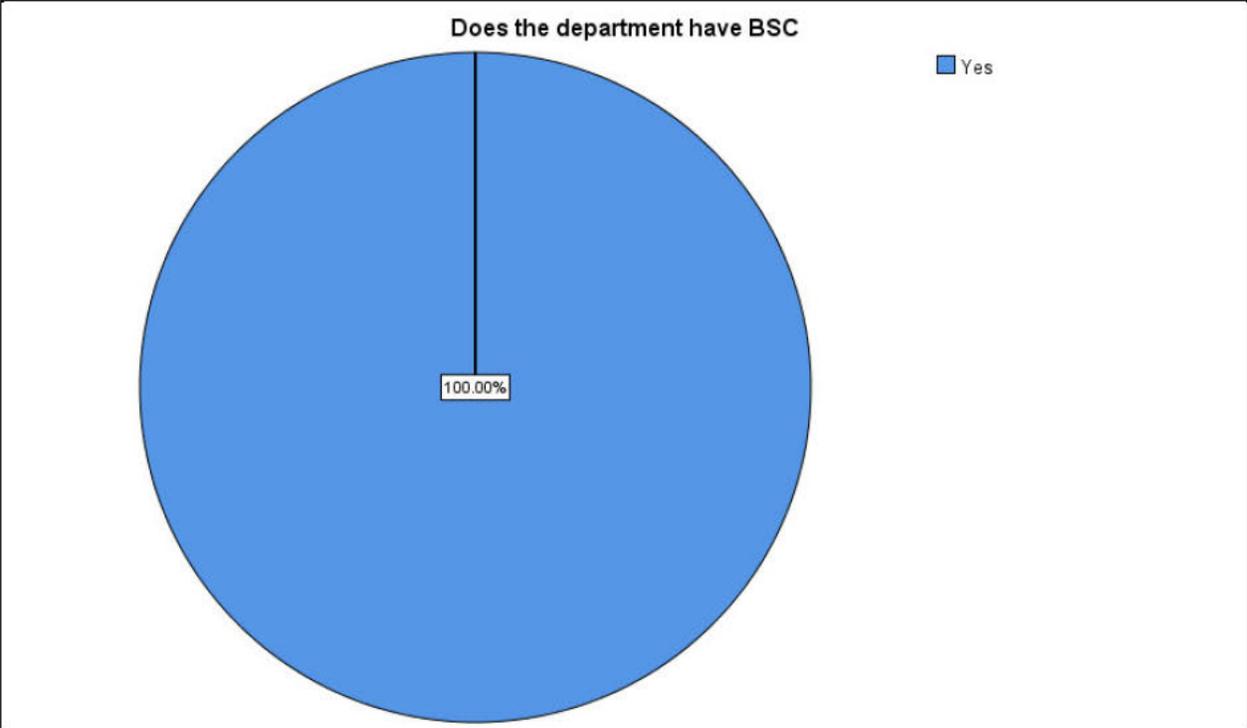


Figure 5.2.3.30: Does the department have BSC

Table 5.2.3.30 and Figure 5.2.3.30 shows a total of 100 % indicated that yes, the department has a BSC committee.

5.2.3.31 Does the department have BEC?

Table 5.2.3.31: Does the department have BEC

Does the department have BEC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	100.0%	100.0%	100.0%

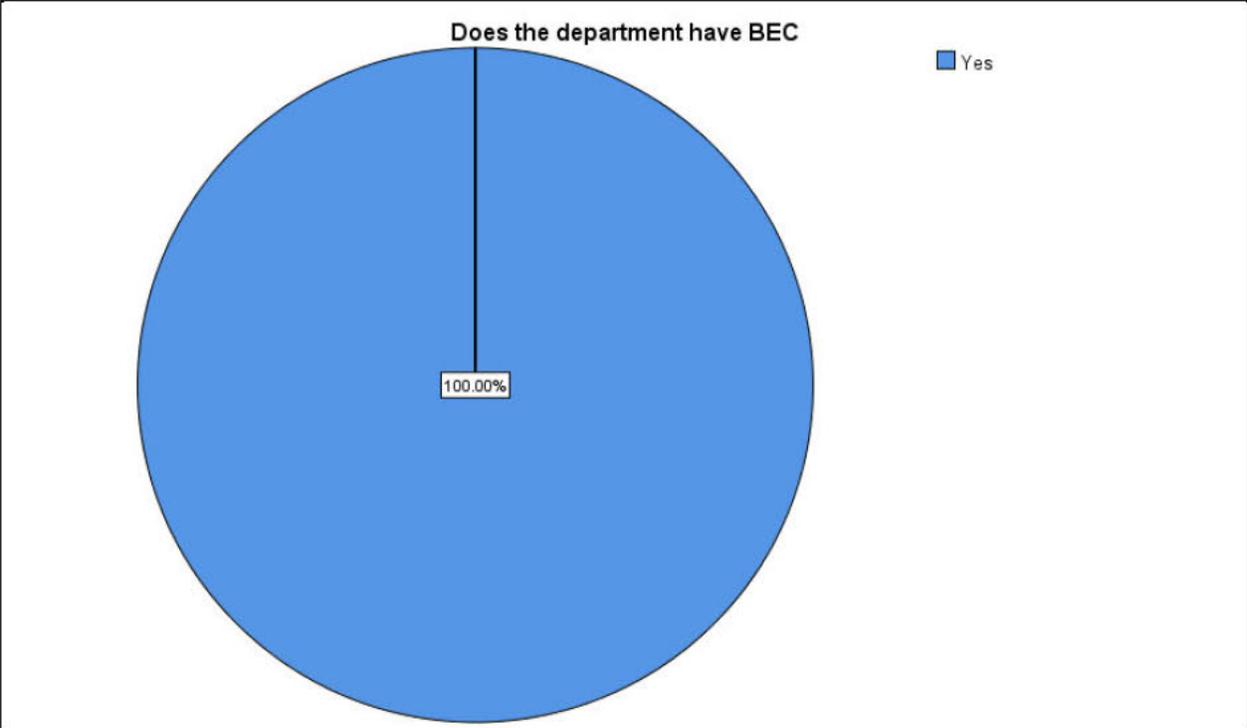


Figure 5.2.3.31: Does the department have BEC?

Figure 5.2.3.31 shows a total of 100% indicated that yes, the department has a BEC committee.

5.2.3.32 Does the department have BAC?

Table 5.2.3.32: Does the department have BAC

Does the department have BAC					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	100.0%	100.0%	100.0%

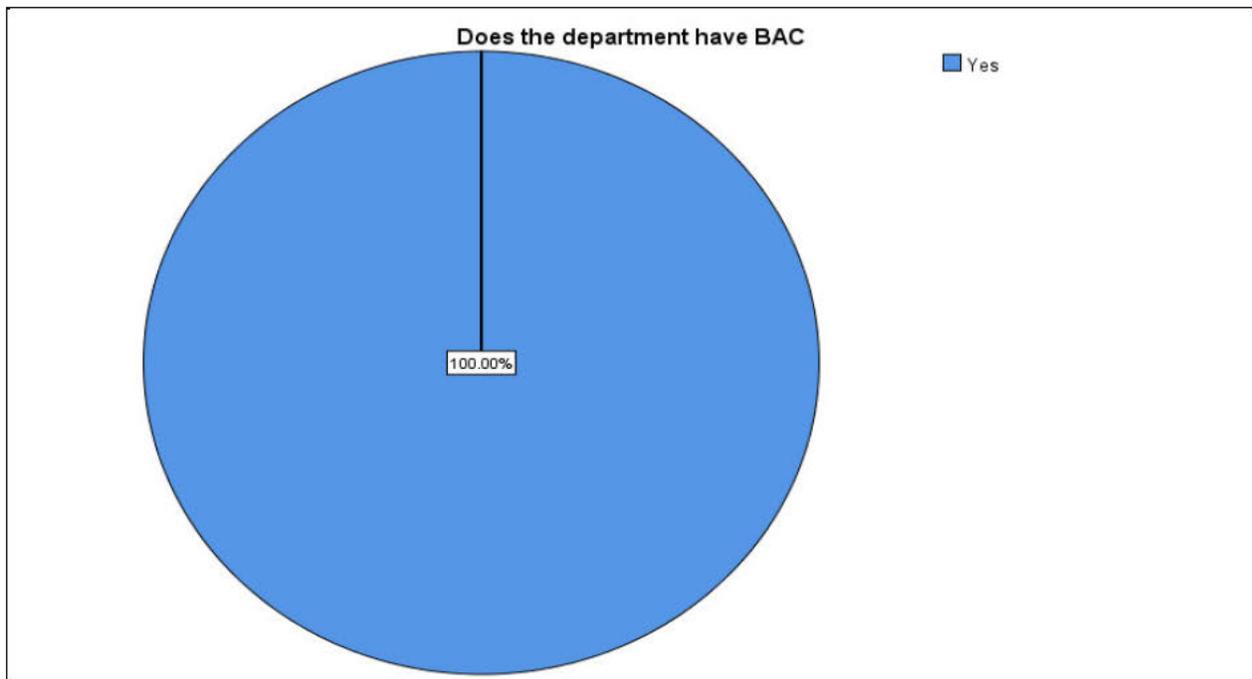


Figure 5.2.3.32: Does the department have BAC?

Figure 5.2.3.32 and the table above (5.2.3.32) show a total of 100% indicated that yes, the department has a BAC committee. According to Mokotedi (2016), a tendering process for goods or services above R 200, 000.00 is administrated by three bid committees which are formulated as per the legislation. These refer to and figure 5.2.3.30 (100% of respondents-yes-BSC), table 5.2.3.31 (100% of respondent-yes-BEC) and figure 5.2.3.32 (100% of respondents-yes -BAC).

5.2.3.33 Is SCM guided by legislation, policies, and practice notes?

Table 5.2.3.33: Is SCM guided by legislation, policies, and practice notes

Is SCM guided by legislation, policies, and practice notes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	100.0%	100.0%	100.0%

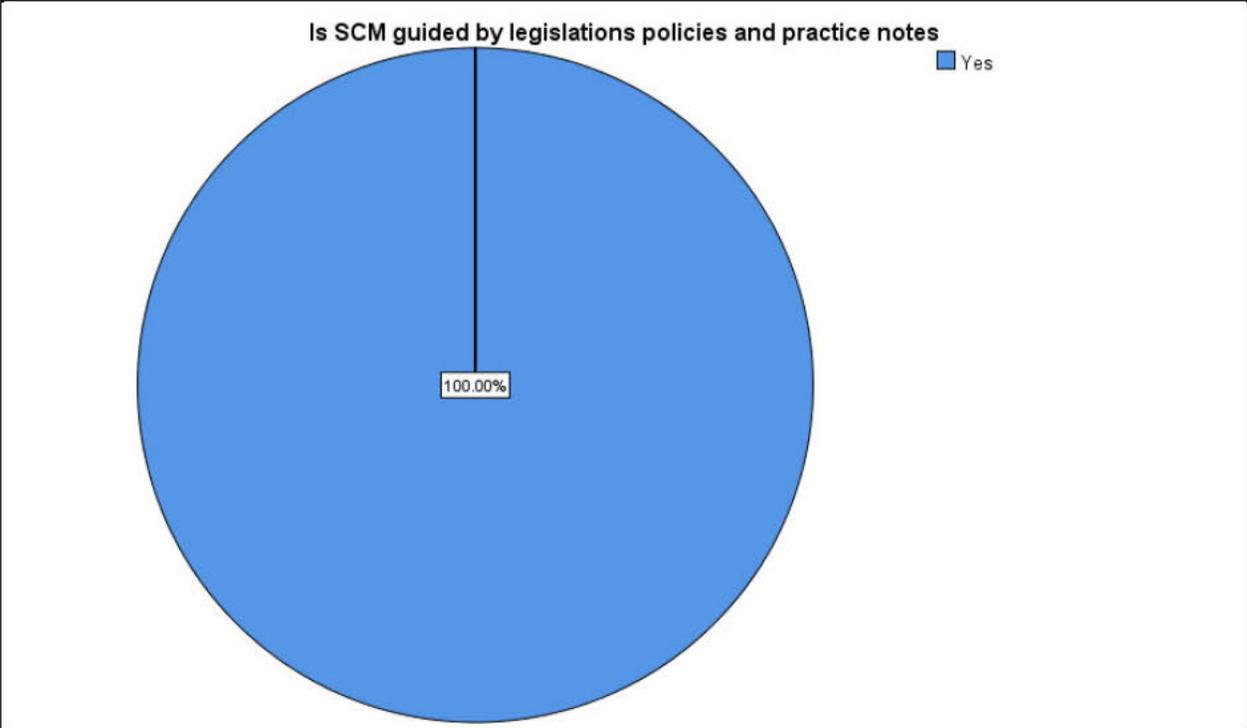


Figure 5.2.3.33: Is SCM guided by legislation, policies, and practice notes?

Figure 5.2.3.33 and the table above show that a total of 100% indicated that, yes, SCM is guided by legislation, policies, and practice notes. This follows Jayalath (2016) point, quoting Rammer and Walker’s (2007) arguments that manageable procurement is only achievable if the planning is based on standards that emphasize the importance of national policy.

5.2.3.34 Legislation and practice notes are correctly executed

Table 5.2.3.34: Legislation and practice notes are correctly executed

Legislation and practice notes are correctly executed					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	100.0%	100.0%	100.0%

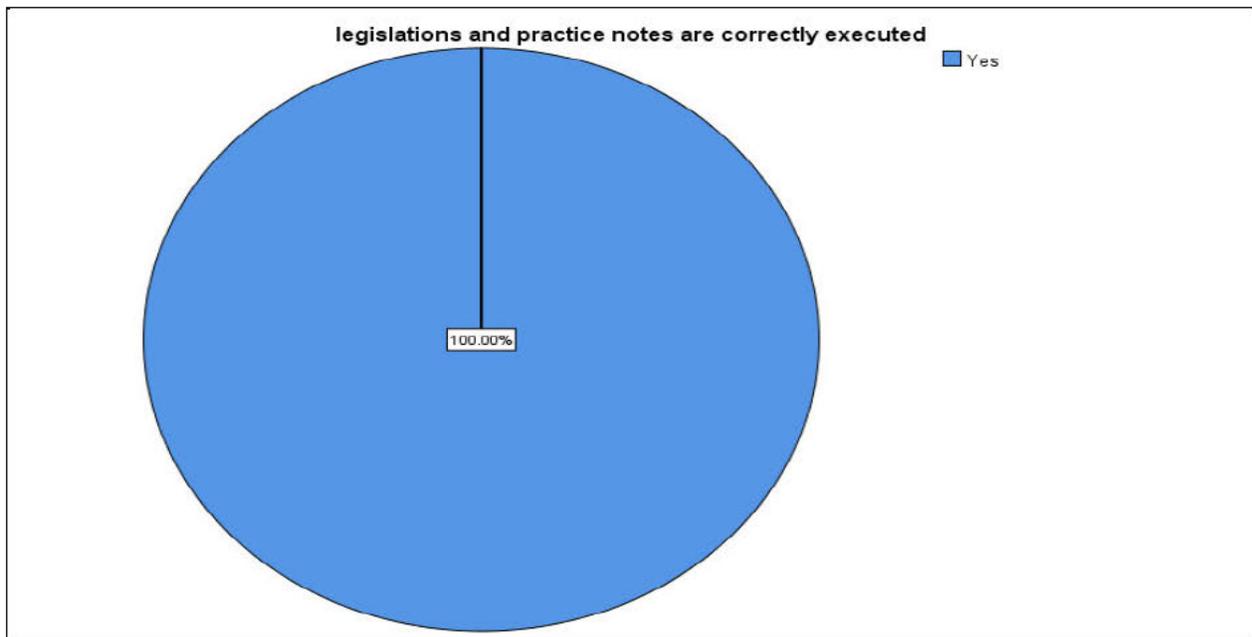


Figure 5.2.3.34: Legislation and practice notes are correctly executed

Figure 5.2.3.34 and table 5.2.3.34 show that a total of 100 % indicated yes, legislation and practice notes are correctly executed. Compliance with public SCM rules, legislation, and standards is essential to ensure governments' policy objectives are achieved. In section 217 of the Republic of South Africa's Constitution, stipulates that when the government department procures goods and services, the procurement process must be fair, equitable, transparent, competitive, and cost-effective. Without adopting prescripts from the legislative framework, non-compliance to legislation will continue (Mazibuko, 2018).

5.2.3.35 Are there strategies used to enforce proper policy adoption?

Table 5.2.3.35: Are there strategies used to enforce proper policy adoption?

Are there any strategies used to enforce policy adoption?				
		Frequency	Percent	Valid Percent
Valid	Yes	7	58.3%	58.3%
	No	1	8.3%	8.3%

	Not sure	4	33.3%	33.3%
	Total	12	100.0%	100.0%

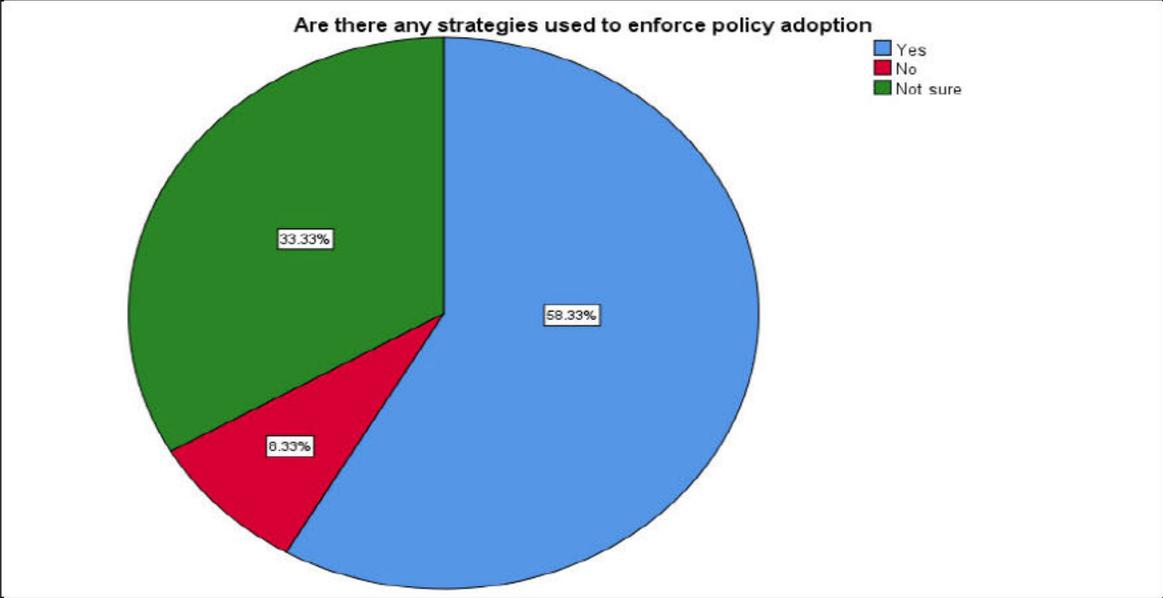


Figure 5.2.3.35: Are there strategies used to enforce proper policy adoption?

Figure 5.2.3.35 and table 5.2.3.35 show that 58.3% of the respondents said yes, there are strategies used to enforce proper policy adoption, 8.3% said no, and 33.3 % of the respondents were unsure. This indicates that if strategies are there, it is not clearly stated why they are implemented. This may cause resistance to the proper implementation of these strategies. Mokotedi (2016) states that the lack of enforcement measures to comply with SCM legislation may give people confidence to disregard the legislative requirements if they know that no investigations will be conducted and there are no consequences for not complying.

5.3 PART 2 INTERVIEW: QUALITATIVE DATA ANALYSIS

Qualitative data was collected by a structured interview survey that targeted senior SCM management at EDTEA. The researcher aimed to conduct interviews with five participants, however, the number of participants decreased to three. Due to the attack of the pandemic virus (COVID 19) nationwide, some interviews were conducted via Zoom and others via a telephone call. Of the three interviewed employees, 1 was the SCM Director, 1 was the Deputy Director, and 1 was the Assistant Director. All the 3 participants had different roles within the SCM.

5.3.1 What are your daily duties and responsibilities involving?

Respondent 1 was the SCM Manager, responsible for overseeing the procurement of goods and services for the entire department, awarding, and monitoring the progress of projects and contracts, managing staff and budget, and attending the meetings to report on these. **Respondent 2** was the Deputy Director, responsible for managing the budget, checking the accuracy of work by supervisees, managing the performance of staff, attending meetings of the QEC and BEC committee, writing submissions, organizing departmental training, and providing advice on line function components. **Respondent 3** was the Assistant Director. Respondent 3 is responsible for facilitating and implementing management. This includes managing implementation and coordination of the provisioning system, the quotation system, and the bid process; providing input on necessary improvements that affect operations or where new developments impair service delivery. Respondent 3 also facilitates, and coordinates bid committees and evaluation processes. This includes coordinating the review of the composition of bid structures, coordinating the function of bid committees representatively, and coordinating the evaluation process in the bid process and the provisioning process.

Respondent 3's further responsibilities include providing monthly reports, such as the bid turnaround time report, quotation turnaround time report, bid committee attendance register, summary of bid committee attendance, waivers above and less than R500 000, and the validity period extension report; providing advice and guidance and input to policy; and managing human resources for the Acquisition Management.

5.3.2 Does the centralization or decentralization of SCM work properly for the department?

Respondents 1, 2, and 3 stated that SCM is centralized, and they also believe that it works well. Moreover, Respondent 1 stated that centralization creates control over the processes. Respondent 2 stated that as managers, they can maintain the same standard of goods and services throughout the department and take advantage of the market by buying in bulk.

5.3.3 What would you say about the processes adopted by the department?

Respondent 1 and 3 believed that processes are in line with legislation. However, Respondent 1 was also of the opinion that some may say there are too many steps in the processes to go through. Respondent 2 believed that adopted SCM processes are derived from the processes approved by the National Treasury to ensure that the department upholds the desired level of efficiency and

effectiveness. The process embeds internal controls and fraud prevention to ensure quality and error-free output while eradicating corruption. Processes have been standardized; this ensures that each staff member has the same information as their colleagues. However, the staff is allowed to use different approaches in the process of implementation. Nonetheless, when approaches are different, sometimes it seems that others are non-compliant, but with a close look, the opposite is discovered. The staff benefits from this kind of approach as these insights are much debated; it means staffs are continuously interrogating the literature and keeps them well informed of the subject matter.

5.3.4 As one of the management team, in the case of late requisition, if there is such, how does the SCM unit deal with that?

According to Respondent 1, the norm to undertake procurement of goods and services less than R500 000.00 is 14 days. If SCM receives late requisitions, they decide on the capacity and ability to carry it out; if possible, SCM does sourcing, and if not, it is declined. Respondent 3 believes that SCM always receives late requisitions; however, they alert the end-user that it is possible they will not be successfully awarded with the contract on time. Nonetheless, requisitions for the office of the MEC are received regardless of late submission. Respondent 3 stated the same as Respondent 2 regarding MEC requisitions, that the late requisitions are unavoidable. The departmental projects involve different stakeholders, such as municipalities and other departments, and depend on the Mayors' and the Head of Departments' (HOD) schedule. Respondents 1 and 2 stated that in the case where requisitions are submitted late because of poor planning, those are rejected.

5.3.5 As a supply chain employee under a management team do you think you have any contribution to the departmental audit status and how?

All the Respondents believed that yes, they have a contribution to the audit status. Respondent 1, on 'how', contributes positively by following the correct processes to prevent irregular expenditure. Respondent 2 has a positive contribution through involvement in the drafting of internal control systems and fraud prevention measures of the department, including adopting the National and Provincial Treasury guidelines to meet the department's objectives. Moreover, Respondent 2 is responsible is a checking officer who detects errors and departure from policy and regulation standards in the documents before issuing the order. This ensures that all documents for which orders are issued are error free. Non-observant and non-compliance issues are non-existent.

While the Auditor General's (AG 's) report always has queries under SCM, Respondent 3 stated that close analysis shows that none of the errors are the result of non-compliance, negligence and non-observance by SCM staff or non-compliance by the units involved. He also mentioned that this had been the case for the past four years. Respondent 3 also believes that he contributes positively to the status of the audits by making sure that all appointments are made according to all SCM Legislations, Prescripts, and Acts. Furthermore, he stated that he is responsible for double-checking all SCM documents before the end of the financial year.

5.3.6 How would you rate the performance of the supply chain management and why?

Respondents 1 and 3 looked at the performance in terms of score rating, where Respondent 1 gave SCM 8/10, and Respondent 3 used the score from 1-5 and gave 3/5. Respondent 1 supported the score by saying, "even though capacity is a huge constraint, the staff go the extra mile to complete tasks; they work overtime and prolong works hours." Respondent 2 believed that the performance of the SCM is above average. Although the end product is right, it takes a long time to finish. However, Respondent 3 supported 3/5 by saying, "SCM always manages to award most of the projects on time regardless of short staff and receives minimum audit queries." Respondent 2 believed that it takes longer to reach the end because the SCM unit operates at 50% of the department.

Further, when volumes are low, the unit performs optimally, but as the volumes increase, errors start to manifest. The time it takes to finalize becomes unreasonably out of proportion. Respondents 2 and 3 looked at the performance in the audit reports and believed that if one may benchmark the SCM performance using the AG's report, the results might be different. Further, they said for the past four years, the unit did not receive any query resulting from non-compliance, negligence, errors, and failure to observe SCM prescripts. All queries in the report emanated from errors and non-compliance by the project officials.

5.3.7 What are the main causes of the above performance?

In question 5.3.6 (above), Respondent 1 used 8/10 to rate SCM performance, stating that this rate reflects the foundation of proper processes (Standard Operating Procedures), reliable controls, and awareness. In the question above, Respondent 2 believes SCM performance is above average and believes that this is not good as it is supposed to be. The professional staffs of the line function components do not see the support function's contribution as a necessity, but as bureaucracy.

This is influenced by their lack of organizational/corporate knowledge, which they see as an impediment to service delivery. Due to this, the unit is forced to rely substantially on interns and spend time training interns; however, when they are ready, their contract is ending, which is worse when the internship is one year. Respondent 3 believed that a rating of 3/5 in question 5.3.6 is not good enough; it is caused by the shortage of staff, which leads to utilizing interns to do permanent employee's duties. As a result, every year, they are forced to train new people, causing unnecessary delays.

5.3.8 What would you do to improve performance of the SCM unit?

Respondents 1 and 3 believed that training and ensuring that the unit is operating with full staff and introducing incentives for SCM staff to avoid corruption could improve SCM unit performance. Respondent 1 was also of the view that conducting training for end-users and encouraging the department to have better planning would improve performance. Moreover, Respondents 2 and 3 believed in filling all the vacant posts with suitably qualified candidates in SCM or procurement to ensure that the unit is working at full capacity.

5.3.9 Does the department have a bid committee and how are these committees structured?

All (3) respondents stated that the unit has bid committees, and these committees are appointed across the department's programs to ensure all programs are represented.

1. All the respondents stated that the department has Bid Specification Committee (BSC). On the primary duty of BSC, Respondent 2 said, "Unlike, in other departments, our BSC does not formulate specifications but approve"; in contrast, Respondents 1 and 2 stated that BSC drafts specifications or terms of reference for bids above R500 000. Respondent 3 stated that BSC is responsible for determining whether or ensuring that the specification is not drawn to favor a specific service provider. The evaluation criteria are commensurate to the service required; the quality standards are there and pitched at the requisite level to enable the department to get the right quality products. The department will derive value for money during implementation.
2. All (3) respondents stated that the department has a Bid Evaluation Committee (BEC) responsible for evaluating bids and making recommendations to Bid Adjudication.
3. All the respondents stated that the department has a Bid Adjudication Committee (BAC) responsible for awarding bids recommended by the BEC. The core function is to check if

the BEC was consistent in applying the evaluation criteria on all bids. The BEC ensures fairness and covers both the bids in the running and those that have been passed over or rejected. The BAC comprises mainly Deputy Director Generals, Chief Directors, and a few Directors appointed because of their experience in committees. The CFO must chair the BAC by design. If they disagree with the BEC's recommendation, they must refer the bids back to the BEC. If the BEC is not in agreement with the BAC's view, the BAC may award to a different bidder and refer to HOD for a decision. Moreover, Respondent 3 added more committees that look at bids for less than R500 000, such as the Quotation Specification Committee (QSE) which drafts specifications or terms of reference for quotations or projects less than R500 000, and the Quotation Evaluation Committee (QEC) which evaluates quotations or projects less than R500 000.

5.3.10 Does it the happen the department gets any appeals after the bid process been done and what are main issues that raised the appeals?

All (3) respondents stated that yes; it happens that the department receives appeals. However, the respondents' views differed on the main issues that raised the appeals. Respondent 1 stated that appeals are raised by various issues, including the exclusion for completion of mandatory documents. Respondent 2 said that the department had had three appeals in the past two years, one of which was withdrawn by the appellant before the Bid Tribunal seating because the bidder felt it was frivolous. Respondents 2 and 3 stated that price and the supplier wanting to know why they were not awarded – probably thinking there was an error somewhere – are other reasons.

5.3.11 Are there any strategies used to enforce proper adoption of these legislative frameworks (Yes) or (No)? Explain these strategies.

All (3) respondents stated that yes; there are strategies to enforce the proper adoption of legislative frameworks. Respondent 1 stated that the unit uses approved policies, delegations, and procedures. Respondents 2 and 3 looked at enforcement from the angle of pre-qualification as the method used to target specific categories; they stated that the Treasury offers training to departmental staff and holds discussions thereof at the CFO's forum the SCM Forums. Furthermore, the Treasury calls for reports of all bids issued each year and requests the enumeration of those issued on a pre-qualification.

5.3.12 Supply chain circulars and policies are changing daily, are there any strategies used to support employees to adopt the change?

All respondents believed that employees get enough support from the Treasury training and school of governance, CFO's Forum, and the SCM Forums.

5.4 CONCLUSION

The results show that the SCM unit is performing above average. However, they need to improve in some sections and circulate information to all SCM stakeholders, including SCM officials, to avoid a lack of information. Furthermore, several issues affect the flow of processes and the overall performance, such as the receipts of MEC's requisitions, regardless of late submission. The issues that affect the processes are caused by the involvement of various stakeholders in departmental projects. The shortage of staff leads to the utilization of interns to perform permanent employees' duties. Unnecessary delay is caused by the need to train new interns every year. There is lack of training to equip end-users on SCM and poor departmental planning and incentives for SCM officials. It remains of high importance to note that these findings represent respondents from EDTEA and cannot be generalized to other departments. The next chapter will present a discussion of the results concerning the collected data on EDTEA SCM processes.

CHAPTER SIX

DISCUSSION OF THE RESULTS

6.1 INTRODUCTION

Chapter five presented the results and the findings obtained from the quantitative and qualitative data collected from SCM management and SCM officials. The critical gaps in the processes were identified, and the findings were discussed. Surajbali (2016) asserts that “a research study intends to find a solution to a problem that has been identified.” The purpose of this chapter is to explicate the findings considering the research objective. This means the intention of this chapter is to provide final remarks on the research problem as indicated in chapter 1 of the study.

6.2 OVERVIEW OF THE RESEARCH STUDY

This study evaluated supply chain management processes at EDTEA in Pietermaritzburg. Mixed methods were used to obtain an impression of the SCM processes at ETDEA. The mixed methods comprised qualitative and quantitative methodology. The researcher used a quantitative method to observe and depict the connection between causes and effects of the problem. The researcher also qualitatively explored the problem. The subtype of non-probability sampling called purposive sampling methods was used to select the respondents of the study. Thus, the sampling consisted of SC employees only, divided into two groups, SC management and other SC officials. Interviews were conducted with management while questionnaires were distributed to the rest of the SC officials. Therefore, thematic analysis was used to analyze data collected through interviews and statistical data analysis methods (survey monkey) with the support of description were used to analyze data by questionnaires. Data collected via questionnaire was analyzed and presented in tables and graphs, providing percentages and some quotations from the existing literature to come up the findings.

6.3 THE ACHIEVEMENT OF THE EMPIRICAL OBJECTIVES ON KEY FINDINGS

This section discusses the achievement of the research objectives. The discussion focuses on the empirical objective stated in chapter 1.

6.3.1 Research question 1: What are the SCM processes adopted by the department?

The first research objective was to evaluate the SCM processes adopted by the department. To answer the research question, respondents were asked several questions. The researcher needed to understand whether the department's SCM is centralized or decentralized to answer the research questions. The majority (83.3%) of respondents said centralized; however, a few (16.7 %) said decentralized.

Respondents were asked to choose the SCM elements established by Treasury and revealed those occurring in the existing literature, such as demand management, acquisition management, asset and disposal management, logistics management, risk management, and contract and performance management. All the elements were selected, all participants selected demand, acquisition, assets and disposal, and logistics management; however, risk and contract and performance management were selected by a few respondents.

The study found that there are committees (BSC, BEC, BAC, QSC, QEC, and assets and disposal committee) in place within the unit to monitor and evaluate the sourcing process. The study revealed that CSD is the most popular database used by the department, rather than CIDB and SITA.

The results revealed that proposals are solicited from relevant suppliers by quotation methods and invitations to bid. The respondents were asked how many days (1-5 days) quotations and bids are open to allow potential suppliers to bid or quote. The study reveals that quotations are opened for three days, although there are few respondents stated 1, 2, 4, and 5 days.

Respondents were also requested to select the number of weeks (1, 2, 3, 4, and more weeks) given to suppliers to bid, and the results show more than five weeks. The study found that the quotations are hand-delivered or emailed by the suppliers before the closing date and time to evaluate. The results show that BAC does the final bid award. After the assets are used and became redundant in the department, most respondents said the assets were auctioned off or donated.

However, the interviews conducted with management revealed that the unit operates under temporary staff and uses interns to perform permanent staff duties. On the other side, the questionnaires reveal there is a great deal to do to improve demand, acquisition, and logistics management, although in terms of the effect, these elements are efficient.

6.3.2 Research question 2: What are the outcomes of SCM processes in the government department?

The study revealed that the poor performance standard influences administration and corporate knowledge, which impedes service delivery. The process embeds internal controls and fraud prevention to ensure quality and error-free output while eradicating corruption.

6.3.3 Research question 3: Can the effectiveness of the SCM processes make the implementation easier?

The study revealed the 8/10 rate of SCM performance, stating that this rate reflects the foundation of proper processes (Standard Operating Procedures), reliable controls, and awareness. The study further revealed that effective SCM processes contribute to easy implementations that result in a 10/10 higher performance, which the department is close to reaching. The professional staff of the line function components do not see the support function's contribution as a necessity, but as bureaucracy. Furthermore, several issues affect the flow of processes and the overall performance, such as the receipts of MEC's requisitions, regardless of late submission. The issues that affect the processes are caused by the involvement of various stakeholders in departmental projects. The shortage of staff leads to the utilization of interns to perform permanent employees' duties. Unnecessary delay is caused by the need to train new interns every year. There is lack of training to equip end-users on SCM and poor departmental planning and incentives for SCM officials.

6.3.4 Research question 4: What are the legislative frameworks that guide the EDTEA supply chain, and its impact on supply chain operation processes?

The research found that the unit is guided by legislation and policies and are correctly implemented. SCM officials receive training from the Treasury, and the unit has forums that are in place to enforce proper adoption of new legislation and policies for new employees.

The research results show that Section 2017 (1) of the Constitution is implemented, which states that goods and services must be procured according to the fundamental principles. The unit promotes that SCM officials should ensure the involvement of women and physically challenged people and ensures the BBBEE is implemented. Further, more the unit promotes locally manufactured goods as per the designated group by DTI. However, according to the AG, reports show non-compliance and errors; these are generated by project officials rather than SCM.

6.4 CONCLUSION

This chapter concludes that the findings indicate the research questions were answered. The following chapter presents the recommendations and conclusions based on the findings after evaluating SCM processes at EDTEA.

CHAPTER SEVEN

RECOMMENDATIONS AND CONCLUSION

7.1 INTRODUCTION

The preceding chapter discussed the findings and provided the concluding remarks of the research problem as indicated in chapter 1 of the study. Chapter 7 presents a summary of the study. This chapter provides useful recommendations based on the data analyzed in chapter 5 and consolidates findings from chapter 6. The recommendations should assist the SCM management of the Department of Economic Development, Tourism, and Environmental Affairs. The limitations of the study and proposition for future research are also provided.

7.2 CHAPTER SUMMARY

Chapter 1 is an introduction and background of the study. The chapter explicated the problem statement, indicated the study's aim and objectives, and explained how the research was undertaken to investigate the SCM process adopted by EDTEA. A brief overview of the study area was presented. The chapter also discussed the significance of the study and the outline of chapters.

Chapter 2 presented the literature available concerning the subject matter. A review of the available literature is vital before a researcher embarks on a research study. This is to ascertain the availability of literature relevant to that particular study. Mulaudzi (2017) states that the researcher needs to understand the existing literature before beginning a research study and find out what has been written in the area of study. Chapter 2 used different literature sources to understand what has been found by different authors regarding public sector SCM. The researcher presented the theoretical frameworks that are used in SCM and identified two theories underpinned the study. The study focused on supply chain management processes in the public sector and policies and regulations employed in the public sector, followed by the dynamics of supply chain and how these dynamics can be addressed. However, the researcher also created a literature base by reviewing the aims and objectives, and the historical establishment of SCM, specifically in the South Africa public sector, followed by difficulties in managing and controlling the public sector supply chain. The researcher also included the international public sector SCM. Further, the chapter discussed the strategic formulation and implementation of SCM processes in the public sector.

Chapter 3 provided an overview of the Department of Economic Development, Tourism, and Environmental Affairs (EDTEA). The researcher presented the location, role, vision, mission, and values. The chapter also discussed the strategic objectives, financial management, and supply chain management of the department that supports the departmental vision.

Chapter 4 provided the research design and methodology that was followed to conduct the study. This chapter outlined the methods used to collect primary data, which included questionnaires and structured interviews. The chapter considered secondary data methods including different official documents such as government legislation, departmental websites, reports, and newspaper articles, which presented more recent information on various aspects regarding supply chain processes. This study is mixed method in its nature. The chapter also discussed the methods of sample selection and the reason behind the sample selection. Further, it discussed the ethical issues. Data analysis and interpretation were made using the Survey-Monkey software.

Chapter 5 provided the presentation of the research analysis and description of data obtained on SCM processes in the public sector. The questionnaires were divided into three sections: Section A was demographic information; Section B comprised previous work experience; and Section C was SC related questions.

Chapter 6 sought to provide a solution to the problem statement and answer the research questions, as stated in chapter 1.

Chapter 7 discusses the recommendations to the SCM unit. The limitations are brought to the forefront. Finally, suggestions for further research and the conclusion are presented.

7.3 RECOMMENDATIONS

As specified in the study's objectives and findings, the following are submitted as recommendations for improving performance and service delivery at EDTEA. The recommendations are extracted from both literature and empirical research.

7.3.1 RECOMMENDATIONS FOR SCM UNIT AT EDTEA

A number of issues have been raised with regards to SCM. After looking at these issues, the following recommendations are presented, which may help improve the functioning of the SCM unit.

- Limited resources that are essential to fulfill the said objective, such as time and human capital, should be assigned and synchronized.
- Develop strong partnerships with stakeholders to ensure that all stakeholders understand the SCM challenges; conduct joint workshops with SCM and other stakeholders to promote better understanding between the groups.
- Develop staff skills, knowledge, and competencies by conducting specialized training courses that equip project managers with documentation skills, so that they are observant of SCM prescripts and work together with SCM to achieve the stated objectives.
- Create incentive programs to appraise and recognize those who are performing exceptionally well. This will improve performance and motivate other employees to work harder.
- The unit should fill all vacant positions with suitably qualified and experienced candidates.
- The six SCM elements need to be improved on, in particular, demand, acquisition and logistics management.

7.4 LIMITATIONS OF THE STUDY

This study contributes to understanding the South African public sector and highlights their SCM processes. However, it has some limitations.

- It was not easy to access information in instances where participants felt unwilling to disclose in-depth information due to the section's confidentiality.
- Lack of funding for the study.

7.5 PROPOSITIONS FOR FUTURE RESEARCH

This study was launched to evaluate supply chain management processes at EDTEA in Pietermaritzburg. The research aimed to evaluate the SCM processes. Based on the process of conducting the study and the findings, the following suggestions address areas of concern and provide for future research opportunities:

- Investigate how the lack of proper SCM systems can lead to poor service delivery.
- Include SCM stakeholders (suppliers and project managers) in similar research studies.
- Consider more interviews within the data collection methods to gain greater insight.
- Conduct research on the factors that contribute to irregularities and poor performance.

7.6 CONTRIBUTION AND IMPORTANCE OF THE STUDY

The study will assist other departments by providing insight into the implementation of SCM processes, thereby improving performance and service delivery. The study also reveals the level to which SCM policies, legislation, and prescripts are espoused. This includes the Constitution of the Republic of South Africa (1996), Public Finance Management Act (PFMA) (Act 1 of 1999) and Treasury Regulations 2005, Gazette No. 27388 dated 15 March 2005, Broad-Based Black Economic Empowerment (BBBEE), the Preferential Procurement Policy Framework Act (PPPFA), and the Prevention and Combating of Corrupt Activities Act 12 of 2004.

The knowledge from the study contributes to confirming whether the processes are correctly implemented, and how they can better enhance performance and service delivery level. The research study will be beneficial to the department if the department applies the researcher's findings and recommendations.

The study also provides knowledge to other academics that may use it as a point of reference and a source to give insight on their topics. The type of study has never been conducted in the department of EDTEA.

7.7 STUDY CONCLUSION

The data was collected to answer research questions on the following: the SCM processes adopted by the department; the outcomes of SCM processes in the government department; whether the SCM process's effectiveness makes the implementation easy, and what legislative frameworks guide SC and their impact on the SC operation processes.

After having carefully considered all data collected through different methods described in chapter 4, the conclusions were drawn.

This dissertation found evidence that the selected department has centralized SCM. Adopted SCM processes are derived from the processes approved by the National Treasury to ensure that the department upholds the desired level of efficiency and effectiveness. The performance of the SCM is above average, although the unit is operating with minimum human capital. Therefore, it can be concluded that there is a need for improvement to maximize all sections' level of efficiency and improve service delivery.

The above conclusions are drawn from the collected and analyzed data. The objectives of the study, to evaluate SCM processes adopted by the department; analyze the outcomes of SCM processes in a government; examine the effectiveness of the SCM processes for easy implementation and investigate and understand legislative frameworks that guide EDTEA SCM and its impacts on SCM operation processes, have been achieved.

The recommendations were generated from the respondents' data and are supported by the existing literature. The researcher hopes that the recommendations provided will assist EDTEA in ensuring that the SCM unit functions more effectively. Moreover, that it creates partnerships with its stakeholders.

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9. APPENDICES

9.1 APPENDIX A1: APPROVAL FROM EDTEA HOD TO CONDUCT RESEARCH WITHIN EDTEA (GATE-KEEPER'S LETTER).

Gatekeeper's Consent

I, Siza Sibande in my capacity as Acting Head of Department hereby give permission to Student name: MS. Nkenkara Yanga (Student No.) to conduct research in my organization.

The student MAY/MAY NOT (May) use the name of the organisation in the dissertation.

Signature of Manager/Owner/Gatekeeper:
Company Stamp: 

Date: 11/04/2018

9.2 APPENDIX A2: LETTER FROM THE HOD ADDRESSING SCM MANAGER AND SCM STAFF TO SUPPORT.



270 Jabu Ndlovu Street, Pietermaritzburg, 3201
Tel: +27(33) 264 2500, Fax: +27 (33) 264 2672
Private Bag X 9152
Pietermaritzburg, 3200
info@kznded.gov.za
www.kznded.gov.za

Enquiries: Mr. F Mbuli

Date: 23/05/2019

TO: DIRECTOR
SUPPLY CHAIN MANAGEMENT UNIT

DEAR MADAM

**REQUEST TO PROVIDE ASSISTANCE TO MS NKENKANA YANGA A
CANDIDATE FOR MASTERS OF COMMERCE IN MANAGEMENT AT UKZN
TO CONDUCT RESEARCH**

This letter serves to confirm that the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) in the province of KwaZulu-Natal is supporting Ms. N Yanga to undertake research titled "Evaluation of supply chain processes at department of economic development, tourism and environmental affairs in Pietermaritzburg".

The department is therefore granting permission to Ms. N Yanga to conduct research in your Unit and to interview employees within the time that yourself and the Researcher agreed upon.

The output of the research will be used to improved strategy alignment in the Department.

Regards,


Mr. [Redacted]
Head of Department
Acting Economic Dev
Actin. Eco mic Development, Tourism
Environmental Affairs (EDTEA)

11/06/2019
Date

&

9.3 APPENDIX A3: INTERVIEW CONSENT FORM



Interview Schedule

Topic: Evaluation of supply chain processes in the Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg

Name Researcher: Nkenkana Yanga (081 77915 77)

Supervisor : Prof M Phiri (033 260 5843)

Research office: Ms P Ximba (031 260 3587)

1. Introduction

My name is Nkenkana Yanga. I am currently doing Master of Commerce in Management at the School of Information Systems & Technology, University of KwaZulu-Natal. I would like to request you to participate in this research study by answering questions that are based on supply chain management processes that are being adopted by EDTEA.

Please be informed that everything will be noted down during interview and the consent to use tape recorder will be appealed.

The information attained from the interview will kept confidential and will be used for the research purpose only.

9.4 APPENDIX A4: QUESTIONNAIRE CONSENT FORM



Consent to Participate in a Research Study
University of KwaZulu-Natal • Pietermaritzburg, South Africa

Title of Study: Evaluation of supply chain processes in the Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg

Name Researcher: Nkenkana Yanga (081 77915 77)

Supervisor: Prof M Phiri (033 260 5843)

Research office: Ms P Ximba (031 260 3587)

CONSENT

I _____ (full names of participant) hereby confirm that I understand the content of this document and the nature of the research study, and I consent to participate in the study. I understand that I have freedom to withdraw from participating in the study any time when I feel so inclined.

Signature of Participant

Date

9.5 APPENDIX A5: QUESTIONNAIRE

QUESTIONNAIRE

Section A: Brief Background

1. Gender?

- Female Male

2. Age?

- Less than 22 years old Older than 22 but younger than 25
Older than 25 but younger than 30 Older than 30 but younger than 50
Older than 50 not comfortable to answer this one

3. Race?

- African Colored
Indian White
If other (specify)..... not comfortable to answer this one

4. Your educational qualifications?

- No formal qualification School leaving certificate
Technical Diploma Postgraduate
Industry specific certification Still studying (Please specify)
Other (Specify): not comfortable to answer this one

Section B: Job & Experience

Section B is to investigate your present and past experience by looking at the role and responsibility. The information that will be obtained from the questionnaires will make a connection between the research question and your answers.

5. How long you have been for this working for this department?

- Less than 6 months More than 6 months but less than 1 year
More than 1 year but less than 2 years Over 2 but less than 5 years

6. Which one of the following positions describes your position in this company?

- Director Deputy director
Assistant director Supervisor
Admin clerk None of the above (please specify):

7. How long you have been occupying this position?

- Less than 6 months
- More than 6 months but less than 1 year
- More than 1 year but less than 2 years
- Over 2 but less than 5 years

10. Your responsibility and duties in this department involve (tick all that applies)?

- Demand management
- Acquisition management
- Logistics management
- Assets and disposal management
- Risk management
- Performance management

9. Have you worked in any other department before joining this one and It was the same s Section or any other supply chain related?

- Yes
- No
- If yes specify

SECTION C

10. Supply chain of the department is:

- Centralized
- Decentralized

11. What are the supply chain processes adopted by the department?

	SCM section	TICK
1.	Demand management	
2.	Acquisition management	
3.	Logistics management	
4.	Assets & Disposal management	
5.	Risk management	
6.	Contract & Performance management	
7	All of the above	
8	Other	

12. Are the following data bases used by the department to select suppliers?

- CIDB

- CSD
- SITA
- All of the above

13. How would you rate the effectiveness of the above databases?

	DATABASE	Very poor	Poor	Good	Very Good
1.					
2.					
3.					

14. How many days before the events or delivery date does SCM give to directorates to submit the request to purchase?

- 1-3 days
- 3-6 days
- 6-9 days
- More

15. Does it happen that directorates submit late requests to purchase?

YES	
NO	

16. If “YES” how many days in most cases?

- 1-3 days
- 3-6 days
- 6-9 days
- More

17. How are proposals solicited from relevant suppliers?

- Quotations
- Bid
- State tender bulletin
- E-tender
- Verbal telephonically
- All of the above

18. How many days does the department open invitation to quote?

- 1 day
- 2 days
- 3 days
- 4 days
- 5 days

19. What is method used to receive quotations?

- Email
- Fax
- Hand delivered
- All of the above

20. Does the department consider the time or date?

- Date
- Time
- Both

21. For bids, how many days does the department open invitations to bid?

- 1 week
- 2 weeks
- 3 weeks
- 4 weeks
- More

22. Does the department promote procuring locally manufactured products?

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Does the department promote procuring locally manufactured products?					

23. Bid process is implemented by bid committee, who does the final award?

- BAC
- SCM Manager
- CFO

24. Does the department have an assets and disposal committee?

YES	
NO	
NOT SURE	

25. Does it happen that the department loses assets?

YES	
NO	
NOT SURE	

26. What are common methods being used to dispose of assets?

- Donation
- Scrub yards
- Staff sales
- Auction

27. Are there any strategies used to measure SCM performance?

YES	
NO	
NOT SURE	

28. How long does the department make contract agreements with suppliers?

- 6 months
- 1 year
- 2 years
- 3 years
- 4 years
- 5 years

29. In the past five years, which year did SCM achieved a clean audit?

YEAR	TICK
2014	
2015	
2016	
2017	
2018	

30. How many times is verification of assets done a year?

- once a year
- 2 times a year
- 3 times a year
- 4 times a year

31.	TICK (YES)	TICK (NO)	TICK (NOT SURE)
Do you think SCM is able to achieve its pillars?			
Do you think supply chain achieves its role according to SCM frameworks?			
SCM legislation, prescripts, circulars and systems are changing daily; is there any kind of training or ways of being informed of anything new?			
Is the supply chain of the department responsible for payments of supplier?			

32. How would you categorize the effectiveness of each SCM process?

	SCM section	Very poor	Poor	Good	Very Good
1.	Demand management				
2.	Acquisition management				
3.	Logistics management				
4.	Disposal /management				
5.	Risk management				
6.	Performance management				

33. Do you think supply chain management processes need to be improved?

YES	
NO	
NOT SURE	

34. According to the above answers, which parts of the supply chain management processes do you think it need to be improved?

	SCM section	Improvement (tick)
1.	Demand management	
2.	Acquisition management	
3.	Logistics management	
4.	Assets & Disposal management	
5.	Risk management	
6.	Contract & Performance management	

7.	Other.....	
----	------------	--

35.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Women, physically challenged and BBBEE are empowered					

36. Does the department have the bid evaluations committee?

YES	
NO	
NOT SURE	

37. Does the department have a bid adjudication committee?

YES	
NO	
NOT SURE	

38. Is SCM of the department guided by legislations and policies?

YES	
NO	

39. What can you say about the implementation of the above legislations; does the department adopt them correctly?

YES	
NO	
NOT SURE	

40. Are there any strategies used to enforce proper adoption of these legislative frameworks (Yes) or (No) or (Not sure)?

YES	
NO	
NOT SURE	

9.6 APPENDIX A6: INTERVIEWS



Interview Schedule

Topic: Evaluation of supply chain processes in the Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg

Name Researcher: Nkenkana Yanga (081 77915 77)

Supervisor : Prof M Phiri (033 260 5843)

Research office: Ms P Ximba (031 260 3587)

2. Introduction

My name is Nkenkana Yanga. I am currently doing a Master’s of Commerce in Management at the School of Information Systems & Technology, University of KwaZulu-Natal. I would like to request you to participate in this research study by answering questions that are based on supply chain management processes that are being adopted by EDTEA.

Please be informed that everything will be noted down during the course of the interview and the consent to use tape recorder will be appealed.

The information attained from the interview will kept confidential and will be used for the research purpose only.

- 1. What are your daily duties and responsibilities involving?

.....
.....

- 2. Does the centralization or decentralization of SCM work properly for the department?

.....
.....

- 3. What would you say about the processes adopted by the department?

.....
.....

4. As one of the management team, in the case of late requisition, if there is such, how does the SCM unit deal with that?

.....
.....

5. As a supply chain employee under the management team, do you think you have any contribution to the departmental audit status and how?

.....
.....

6. How would you rate the performance of supply chain management and why?

.....
.....

7. What are the main causes of the above performance?

.....
.....

8. What would you do to improve performance of the SCM unit?

.....
.....

9. Does the department have a bid committee and how are these committees structured?

.....
.....

10. Does the department happen to get any appeals after the bid process has been done and what are main issues that have raised the appeals?

.....
.....

11. Are there any strategies used to enforce proper adoption of these legislative frameworks (Yes) or (No)? Explain these strategies.

.....
.....

12. Supply chain circulars and policies are changing daily, are there any strategies used to support employees in adopting the changes?

.....
.....

9.7 APPENDIX A7: ETHICAL CLEARANCE CERTIFICATE FROM UKZN RESEARCH OFFICE



10 February 2022

Yanga Nkenkane (217077362)
School Of Man Info Tech & Gov
Pietermaritzburg

Dear Y Nkenkane,
Protocol reference number: HSSREC/00000750/2019

Project title: Evaluation of supply Chain Processes at Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg
Amended title: Evaluation of supply chain processes in the Department of Economic Development, Tourism and Environmental Affairs in Pietermaritzburg

Approval Notification – Amendment Application

This letter serves to notify you that your application and request for an amendment received on 08 February 2022 has now been approved as follows:

- Change in title

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

Best wishes for the successful completion of your research protocol.

Yours faithfully



Professor Dipane Hlalele (Chair)

/ss

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X6001, Durban 4000
Tel: +27 31 260 8350 / 4557 / 3587

Website: <http://research.ukzn.ac.za/research-ethics/>
Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

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