



**Contract Specification as a barrier for SMME access to eThekwin
Electricity Procurement Services**

By
Duma Mhaule

Student Number 202522936

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Supervisor: Dr Joy Ndlovu

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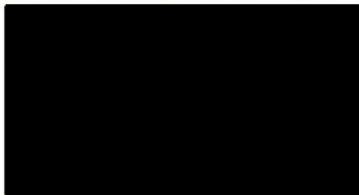
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Praise to God the almighty. With God all things are possible. It is only through him and by him that I have reach this milestone today.

To my wonderful wife, Zanele Mhaule, thank you for loving and supporting me.

To my children, Uminathi and Usangile, thank you so much for your understanding, you are my inspiration.

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Thank you, Ngiyabonga

EDITOR'S LETTER - Old



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9 Caithness Terrace, Scottsville, 3201

Tel: 084 4502 577 Fax: 086 6682 361



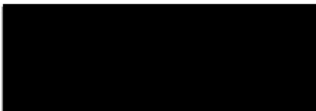
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To whom it may concern,

This letter serves to confirm that the paper with the title "Contract Specification as a barrier for SMME access to eThekweni Electricity Procurement Services" has been edited and proofread. The services included correcting errors, grammar, punctuation and how information was presented.

Yours Sincerely,



N. Ndlovu

Director

Thank you for your business!

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9 Caithness Terrace, Scottsville, 3201

Tel: 084 4502 577 Fax: 086 6682 361

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To whom it may concern,

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ABSTRACT

Public procurement has been identified as a tool to fight South Africa's triple bottom line challenges of unemployment, inequality and poverty. Similarly, Small, Medium and Micro Enterprises (SMMEs) growth and development is seen as part of the solution to the same triple bottom line. However, failure rate of SMMEs is very high, estimated to be 71%. Access to public procurement is one of the identified support mechanism/tool for SMMEs to develop and grow. During South Africa's apartheid era, public procurement was mostly used to protect the interests of white-owned enterprises. Some people still argue that even during the current democratic South Africa, public procurement is still used for similar purpose, specifically in the Electricity sector where most part of the work is considered specialised and only the well-known companies have the necessary skills and resources to provide required services.

Tender or contract specification is one of the greatest tool used during public procurement to select a suitable company to provide the required service or product. The same contract specification can be a barrier to SMMEs. This study is principled with the aim to determine if contract specification is a barrier for SMMEs to access procurement services. The study was conducted within the Electricity Utility environment of eThekweni Municipality: Electricity Unit (eThekweni Electricity). The descriptive quantitative study was used with population or sample of eThekweni Electricity officials/Employees which were Engineers and Contract Site Supervisors (Clerk of Works) as well as eThekweni Electricity bidders (potential contractors) as participants.

Primary data was collected through a web-based survey questionnaire on a random sample size of 80 of eThekweni Electricity Employees and 140 bidders. Data was analysed using SPSS statistical tool. The response rate was 64% for eThekweni Electricity employees and 41% for eThekweni Electricity external bidders.

The study found that contract specification is a barrier for SMMEs access to eThekweni Electricity procurement services and the greatest barrier is the contract value or size. It has also been found that Engineers can and should develop contract specification that will provide SMMEs access to procurement without compromising service delivery. Success of any procurement projects should be measured on both SMMEs development and value for money rather than the current quality of delivered service within budget and time.

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Abbreviations

BBBEE	Broad-Based Black Economic Empowerment
CIDB	Construction Industry Development Board
DTI	Department of Trade and Industry
KPI	Key Performance Indicators
PPPFA	Preferential Procurement Policy Framework
RDP	Reconstruction and Development Programme
SBD	Small Business Development
SMMEs	Small Medium and Macro Enterprises
SPSS	Statistical Package for the Social Science

CHAPTER 1 INTRODUCTION

1.1 Introduction

Small, medium and micro enterprises (SMMEs) are considered to play a critical role in the economic growth of countries. Similarly, in South Africa, SMMEs growth and participation is marked to be at the centre of the economy and the fight against the country's triple bottom line challenges of poverty, unemployment and inequality. However, SMMEs continue to face various challenges or barriers which limit their growth and effective participation in the country's economy. One of the barriers that SMMEs face is access to public procurement services. This is due to the way in which tenders or contracts are structured and awarded. This is what contract specification requirement is about. Public Procurement lays out the guiding principles for SMMEs on how to strike the right balance in order for public procurement systems to support businesses and facilitate access to public procurement markets and services (OECD, 2018).

Public procurement is a critical tool necessary for government to deliver services to the people. In addition, if public procurement is properly structured can ensure that while those services are delivered to the people, the fight against the triple bottom line take place. This mean that at the end of every project such as building of electricity infrastructure, not only the electricity infrastructure will be achieved but employment opportunities including skills, knowledge and experience will also be accomplished. Further, the imbalances of the past such as inequalities can then be addressed. The South Africa blueprint National Development plan states that SMMEs will be stimulated through public and private procurement and will contribute to changing apartheid legacy patterns of business ownership (N. P. Commission, 2012).

This chapter will discuss various significant topics such as the motivation for the study, objectives and research questions of the study. It will also examine the study methodology as well as its limitation of this study.

1.2 Motivation of Study

The study is premised on the need for a sustainable solution to address the issue of SMMEs gaining access and development through the use of public infrastructure procurement and delivery services, with emphases on contract requirements or specification. The study will look at contract specification as a barrier on SMMEs to access procurement services not only from the perspective of the SMMEs as undertaken by most previous studies but critically examines the perspectives of eThekweni Municipality: Electricity Unit (eThekweni Electricity) employees who are responsible for development and implementation of contract specifications.

On successful completion, this study will assist eThekweni Electricity and other utilities within South Africa on the requirements to develop contract specifications that are pro-SMMEs with minimum impact on actual service delivery. In addition, the study will also contribute to the growing body of knowledge on SMMEs development barriers within public infrastructure procurement and delivery projects.

1.3 Focus of the Study

Of the many known barriers for SMMEs' access to public infrastructure procurement services, the study will focus on contract specification. The aim is to determine or confirm if contract specifications are a barrier for SMMEs to gain access to eThekweni Electricity procurement services and also identify the requirements within the contract specification that contributes the most on creating barriers for SMMEs access. The study seeks at assisting management to identify requirements' problems and provide recommended solutions on what can be done to solve the challenges.

The study will focus on electricity infrastructure services (Electrical Engineering) while many studies conducted so far were conducted within the construction (Civil Engineering) infrastructure services field such as the construction of public infrastructure which include but not limited to buildings and roads. In addition, numerous studies conducted on SMMEs barriers are conducted from the perspectives of the SMMEs owners or the perspectives of policy makers or executive management. According to the academic knowledge, there is currently no study undertaken that looks at SMMEs barriers from the perspectives of Technical public official such Engineers. This is a significant research for utility management as the study will provide a view on areas that requires the utmost attention.

Over and above eThekwini Electricity, this study can be generalised to other similar setting such as other municipalities and electricity utilities including the state electricity supplier Eskom, hence assisting policy makers such as ministers on the barriers is imperative so that specific steps are taken.

First and foremost, the study will contribute to the existing body of knowledge in a unique way as it is conducted within the specialised field of Electrical Engineering (Electricity Infrastructure such as High Voltage Substation) industry as compared to the Civil Engineering (Public infrastructure construction such buildings, roads, bridges) industry. Secondly, it is conducted using Engineers, the developers and implementers of contract specification as primary participant instead of either the policy makers, buyers or SMMEs owners as previously done.

1.4 Problem Statement of the Study

During February 2016, essential services of eThekwini Municipality were interrupted by a local group of aggrieved individuals called Delangokubona Business Forum (DBF). The affected crucial services included Electricity Unit, Water and Sanitation Unit as well as Roads and Storm Water Unit. The interruption of services was through violent intimidation of eThekwini Municipality staff and contractors. The employees were threaten with fire-arm, vehicles were stoned and burnt. Further to this, some contractors were assaulted. This resulted in a total of four weeks of work stoppage resulting in a disruption of services on the major part of the City of Durban, KwaZulu-Natal. One of the grievances of DBF was that the group wanted to be part of the Municipality contractor's based either through direct contract or sub-contract. DBF claimed that the Municipality has failed to create contract opportunities to the group as local small businesses.

Following the above incident, a meeting was called for eThekwini Electricity officials which included the Head of the Department, Deputy Heads and Engineers responsible for the procurement of infrastructure projects. During the meeting, eThekwini Electricity Head advised that eThekwini Electricity is being accused of failing to provide contract opportunities and to develop local contractors. These local contractors mainly fall under the SMMEs cartel. The assertion was that the group's local small contractors were not awarded tenders.

For the above reason, a seed was planted hence the study is conducted to look at the validity of this claim. Further, to identify factors that prevent SMMEs to access eThekweni Electricity infrastructure projects. A simple enquiry within eThekweni Electricity indicated that the SMMEs are unable to meet the minimum requirements of contract or tender specification but this needed to be validated through a rigorous study.

For these reasons, it was therefore imperative that a study is conducted with eThekweni Electricity to determine the barriers of SMMEs' access to eThekweni Electricity procurement services with emphases on contract specifications. Furthermore eThekweni Electricity's Engineers perspectives is vital as the Engineers are responsible for contract specification development, contract evaluation and contract management which include the onsite delivery of the required services. The aim is to provide recommended action to be taken as a way forward driven by the responsible Engineers to fast track the sustainable development of SMMEs through eThekweni Electricity infrastructure procurement projects.

1.5 Research Objectives

1. To determine eThekweni Electricity's understanding of the role of public procurement;
2. To determine if current eThekweni Electricity's contract requirements/specifications are a barrier for SMMEs access to procurement services; and
3. To determine the impact of pro-SMMEs contract specifications on the successful delivery of procurement services.

1.6 Research Questions

This study seeks to answer the following questions:

1. What is eThekweni Electricity's understanding about the role of public procurement?
2. Does the current mandatory requirements specified on contract specification create a barrier for SMMEs access to eThekweni Electricity's procurement services?
3. What will be the impact of pro-SMMEs contract specifications on successful delivery of procurement services?

1.7 Research Methodology

The study was conducted within eThekwini Electricity infrastructure procurement and delivery services. It was conducted in order to determine if contract specification is a barrier to SMMEs access to eThekwini Electricity procurement services. Likert scale questionnaires were used to collect quantitative data. The quantitative primary data was collected using website base survey questionnaires.

A description research design was chosen. Stratified random sampling was used to select participants. EThekwini Electricity Engineers were used as primary participants, Clerk of Works as well as bidders were used as secondary participants. An email was sent to all the randomly selected participants requesting them to complete the survey questionnaires including two reminders. Data collected was analysed using SPSS Statistics software package.

1.8 Limitations of the study

The study was conducted at eThekwini Electricity within an area of Electricity infrastructure procurement even though the issue of SMMEs barriers affects all industries. It is possible that eThekwini Electricity infrastructure is uniquely designed and specific tender or contract requirements are used to manage risk as compared to other utilities that may use technologies that are freely available and does not need a specific skill to work on them. In addition, the study only determined the specific requirements on contract specification that created the barrier. Further, the study mainly confirmed the relationships but did not determine the rationale of the relationship and how the relationship was and on whether such relationship was directionally or not. Further studies will be required to determine reasons for such relationships.

1.9 Chapter Summary

This Chapter presented a brief overview of the study on critical topics such as the motivation and the focus of the study as well as the problem statement. The Chapter also discussed the study objectives and research questions that need to be answered at the end of the study. The methodology and the limitation of the study were also highlighted.

The next Chapter will review literature on the subject matter.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter reviews and discusses available literature on the subject matter. The review of available public information on the subject was conducted in order to gain profounder understanding of the subject. The chapter describes the definition of SMMEs in the South African perspective which provide an in-depth knowledge concerning SMMEs in general within the country. It is followed by the role of SMMEs on the economy and on the fight against South Africa's triple bottom line challenges of poverty, inequality and unemployment. Additional review will include the subject of public infrastructure procurement as a tool for SMMEs development and the barriers faced by SMMEs to access public procurement. Even though there are many barriers on SMMEs access to public procurement services, emphases is made on the contract specification and on infrastructure procurement and delivery related projects or services.

2.2 Definitions of key terms

2.2.1 Definition of SMMEs

Small Business in South Africa is defined by the National Small Business Act of 1996 (Act NO. 102 OF 1996) from the Department of Trade and Industry (DTI) using various elements depending on the sector that the business belongs to (DTI, Presidency, & Parliament, 1996). Other countries uses the term SME instead of SMME but the general meaning is similar. According to Seda (2016) SMMEs are defined in a number of different ways, generally with reference either to the number of employees or to turnover bands (or a combination of both, as in the National Small Business Act 1996, which also allows for variations according to industry sector). A common definition of SMMEs includes registered businesses with less than 250 employees. Various authors have usually given different definitions to this category of business (Seda, 2016). (DTI et al., 1996) define SMMEs per category for Electricity Sector which is a focus of this study as follows:

Table 2-1: Category of SMME's (Source: DTI)

Business category	Annual Turnover	Number of employees	Asset Value
Micro-enterprises	R 150 000 (Max)	5	R 100 000 (Max)
Very Small	R 150 000 to R 4 000 000	5 to 20	R 100 000 to R 1 500 000
Small	R 4 000 000 to R 10 000 000	20 to 50	R 1 500 000 to R 3 750 000
Medium	R 10 000 000 to R 40 000 000	50 to 200	R 3 750 000 to R 15 000 000

Although SMME term is used, the focus of the study is mainly on Micro-enterprises to Small instead of the medium enterprises. It also focuses on businesses predominately owned by South Africa's previously disadvantaged population group.

2.2.2 Procurement

Procurement is a mechanism used by clients (employers) to acquire goods or services from service provider/s using pre-defined roles and responsibilities of both parties (Phoebe Bolton, 2016). In summary, procurement is a process of creation, management and closing of contracts. Public Procurement is procurement within the public sector environment, while Targeted Procurement is a procurement used by South African public entities, such government department and state own enterprises to procure goods and/or services by targeting a specific group/s such as SMMEs. In this paper procurement, targeted procurement or public procurement will be used interchangeable for the same meaning of procurement of goods and services within the public sector with a goal to develop SMMEs, therefore fighting against South Africa triple bottom line challenges.

2.2.3 Contract/Tender Specification

According to Cunningham (2015, p. 5) specification "sets out the kind and quality of the materials and the standards of workmanship required". These are the actual output deliverables such as the type of required products, systems, process and assets including their respective performance and quality. In addition to outlining output, specification also defines how those outputs should be delivered thus tender specification document detailed the condition of tender, mandatory requirements and condition of contract including the scope of work. Once the successful tenderer or bidder has been appointed the very same tender specification becomes a contract specification where the "how" takes centre stage.

Although the concept of tender specification and contract specification does not have the same meaning, in this paper the conceptions will be used interchangeable for the same meaning. Tender specification is prepared by the client and advertised so that all potential contractors are competing on equal footing (P. Bolton, 2014). In public procurement, bidders are required to meet the stated requirements which are called responsive to specification before the tenderers can be eligible for an award. Previously, clients used to only apply the lowest bidder principle for an award, however, nowadays additional requirements called qualification and selection criteria are set in order to minimise risk and increase the possibility of project success (Cheaitou, Larbi, & Al Housani, 2018).

Specifications include both general requirements and specific requirement. Specific requirements are generally referred to as technical requirements. In South Africa's public procurements, general requirements are those requirements that are applicable to most if not all tenders such as Tax complaint and BBBEE. The specific requirements on the other hand deals with requirements that are unique to that specific tender such as the scope of work, required resources, experience of bidders and staff, registration with relevant legal bodies such Construction Industry Development Board (CIDB). This study debrief contract specification and tender technical specification. Technical specification assist with defining and measuring the required deliverables (Cunningham, 2015, p. 5).

Contractors should not have much problems in terms of complying with general specification because general specification is not unique to the work at hand. There are many assistance activities available to assist bidders to comply with general specification. Technical specification on the other hand is not easy and has limited support as it requires specific knowledge and experience on the job requirements.

2.3 Role of SMMEs within the economy

Many studies locally and international have been conducted on the role and importance of SMMEs in the country's economy. According to European Commission (2008) cited in (Flynn, 2018, p. 2) SMMEs are at the centre to create employment, entrepreneurial activity and the growth of the country. Headd, (2010), Neumark, Wall & Zhang (2011), Wright, Roper, Hart & Carter, (2015) cited in (Van Der Merwe, 2017, p. 46) indicate that SMMEs have higher rate of job creation than large companies.

The SMMEs' sector also provides the necessary competition which then drives prices lower for the end users, specifically due to their minimum overheads and streamlined operations (Flynn & Davis, 2017). SMMEs are critical within a country economy not only for creating competition but also for innovation (Loader, 2015). SMMEs are a source for both value and jobs creation as well as economic development (Van Der Merwe, 2017). Seda (2016) also state that SMMEs are key drivers of economic growth, innovation and job creation. These are some of the critical factors on the role of SMMEs in the economy. It is impossible for countries to talk about economic development but not say anything about SMMEs' participation, hence South Africa's blueprint National Development Plan has facilitating of SMMEs' growth and development at the centre of economic growth and poverty alleviation (N. N. P. Commission, 2012). Creativity and Innovation are at the centre of most SMMEs' start up and such drives economic development.

As a result of many studies conducted about the critical role of SMMEs within the economy, similarly the South African government has and is working on a number SMMEs development initiatives. This is evident on the development of many support policies, strategy documents and acts such as the "National Small Business Act of 1996 (Act No. 102 of 1996)" (DTI et al., 1996). SMMEs' development was actually identified from the inception of the new Democratic South Africa through the White Paper on Reconstruction and Development Programme (RDP) which was tabled and adopted in Parliament on 15 November 1994 and was Gazetted as Notice 1954 of 1994 (RDP, 1994). The RDP (1994) called for development of the SMMEs to play an active role in the economy and a competitive policy that will ensure that participation of SMMEs in the economy is not jeopardised by anti-competitive structures and conduct.

In 1995 the department of Trade and Industry (DTI) published Notice No. 213 of 1995 which is the White Paper on National Strategy for the Development and Promotion of Small Business in South Africa that was tabled and adopted in Parliament on 20 March 1995 (DTI, 1995). DTI (1995, p. 3) states that "Small, medium and micro-enterprises (SMMEs) represent an important vehicle to address the challenges of job creation, economic growth and equity in our country". Annually during the State of the Nation Addresses, various South African Presidents have spoken about SMMEs development.

The preferential procurement policy framework (Act no. 5 of 2000) (PPPFA) of which all procurements of state organs are required to comply with called for all government structures to determine their own preferential procurement policy and implement it within the framework of implementing the programmes of the Reconstruction and Development Programme (RDP) (Treasury, 2000).

Noticing the importance of SMMEs on the economic growth, the current South African government decided to form the Ministry of Small Business Development (SBD). The vision for the Department of Small Business Development (DSBD) called for “A radically transformed economy through effective development and increased participation of SMMEs and Co-operatives in the mainstream economy”(DSBD, 2014?). The Minister of Small Business Development: Minister Lindiwe Zulu stated in her speech during the opening session of the national small business policy colloquium that the SMMEs sector contributes more than 45 percent of the GDP and that the SMMEs sector has a potential of creating more employment opportunities (SBD, 2014).

2.4 Role of public procurement

Public procurement is a critical tool necessary for government to deliver services to the people. OECD (2013) cited in (Flynn, 2018, p. 4) indicated that public procurement is crucial as it amount to about 29% of state expenditure in developed countries. This amount to a lot of money under the control of government to use to drive its policies. The Constitution of the Republic of South Africa provides guidelines on how procurement should be conducted within the public sector. Section 217 (1) of the Constitution of the Republic of South Africa No. 108 of 1996 states that “When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is equitable, transparent, competitive and cost-effective”(South & Juta, 2011).

Section 217 (2) and 217 (3) then add by calling for preferential policy and the establishment of framework for procurement respectively (South and Juta, 2011). For this reason Target Procurement Policies have been developed within the state organs and used in line with the Constitution of South Africa and the Preferential Procurement Policy Framework (Act no. 5 of 2000) to procure goods and services and also to address the imbalance in business ownership that was created by the apartheid system. Thus, public procurement is utilised as a tool to address the inter-link triple bottom line challenges of the country which are poverty, unemployment and inequality. Similarly the United Kingdom (UK) government have also identified that public procurement can be used over and above the need to get value for money but to strategically achieve additional objectives such as socio-economic goals, SME development and increase minority ownership of businesses (Loader, 2015).

Sahle (2002, p. 1) states that “if properly planned and executed, procurement could be used to address and meet long-term development goals and contribute towards poverty reduction”. In support with this view is R Watermeyer (2002) who stated that depending on how procurement is used or structured and conducted, it can provide businesses and employment opportunities and facilitate social and economic development. This is the viewpoint dialogues about a significant issue of structuring and conducting public procurement in a manner that assist with the fight against the injustices of the past and triple bottom line in South Africa’s case. Targeted procurement if used effectively can unlock the development of SMMEs, specifically on infrastructure construction projects. Public procurement provides SMMEs with an opportunity to conduct businesses with government at minimum risk of not being paid, unlike in the private sector where small companies perform work and once complete the small firm discover that there is no money to pay or the company has just apply for either business rescue or liquidation. According to Loader (2015), public procurement allows Small and Medium Enterprises (SME) to do business with prestigious reliable employer in the case of United Kingdom (UK) government. In addition, public procurement is a vehicle for government to provide direct support to the SME sector (Loader, 2013).

Pipe (2011) augmented the importance of considering the entire project life cycle during procurement to focus on SMMEs development. This requires the involvement of the project administrators and ensure that each individual is committed to SMMEs development from the entire life cycle of the project (Pipe, 2011). This process is about project administrators being aware that procurement is not just about infrastructure delivery projects but also about fighting the triple challenges of poverty, unemployment and inequality. Government can do more to fight the triple bottom line challenges and fast track jobs creation by effective utilisation of SMMEs as preferred service providers (SAICA, 2015). Study conducted by SAICA shows that only 10% of SMMEs do business with government and these 10% SMMEs that do business with government create more jobs than the rest of the remaining 90% (SAICA, 2015). Some argue that the jobs created are normally temporarily, but these jobs are more valuable to the poor and less fortunate communities. In addition, such jobs and projects come with training and skills development. Developing countries, including Brazil, Philippines and Namibia, apply procurement as an instrument for job creation, promote fair labour conditions and the use of local labour (Rogerson, 2004). On their studies (Govender & Watermeyer, 2000) discovered that the system of procurement has both facilitated and accelerated growth in South Africa's black construction sector.

For the above reasons, it is imperative for public officials who are responsible for procurement of goods and services to understand this critical role of public procurement so that while officials are developing procurement documents such as contract requirements, the process is conducted with a focus of providing SMMEs access to procurement services. This study therefore tests if eThekweni Electricity Engineers which are responsible for procurement services document development understand the role of SMMEs within the economy and the importance of developing tender specification requirements with SMMEs development in their mind.

2.5 SMMEs access to public procurement barriers

Access to public tender or contracts is one of the contribution factors for the failure of SMMEs (Clover & Darroch, 2005). The difficulty of SMMEs access to tender or contract specifically in the public sector is evidence on the study conducted by the South Africa Institute of Chartered Accountants (SAICA) which found that 90% of the surveyed SMMEs do only generate 10% of their revenue from doing business with government, while 75% does not conduct any business with government (SAICA, 2015).

International Labour Organisation (ILO) have acknowledges the enormous problems that SMMEs confront in securing public tenders, in terms of the way that contracts are designed and awarded (Rogerson, 2004). According to the Office for National Statistics (2012), House of Commons Library (2015) and PwC(2014) as cited in (Flynn, 2018, p. 2) SMEs are unlikely to successfully compete with large companies on public tenders.

Various reasons have been identified as contribution factors by various authors such as those mentioned by Loader (2015) which include cost of bidding, poor defined specification, payment terms, the lowest price rule, contract size and period, proof of track record, the technical or professional competencies and financial capacity. Some barriers can be considered general and others are specific such as those included as a mandatory requirement in the contract or tender specification. Included in the tender or contract specification are general requirements and specific requirements which are normally called technical specification. Compliance with the technical requirements is part of the contract specification and is the main focus of the study. However, before one can comply with minimum technical requirements of tender specification one must first understand those requirements. For this reason, understanding the specification is also identified as a barrier. Generally the driver of the process determines the level at which the technical requirements are set based on the contract value or size, hence contract size or value as a barrier was also considered. All these possible barriers will need to be tested in this study. Additional related barriers such as compliant with standard and regulatory specification such as Health and Safety Regulations as well as lack of policy understanding by public official, and unfair bid evaluation will be briefly discussed.

2.5.1 Technical Specification understanding and compliant

In order for bidders to comply with the set minimum requirements on the technical specifications, the bidders must first understand the technical specifications. This include the actual scope of work of the project. Bidders should be able to understand even the reasons why the employer had to have those minimum requirements. For example, the specification may call for the bidding company to have a specific tool such as a Tractor-Loader-Backhoe (TLB). If the bidding company understands the required work and the application of the TLB, the bidding company will provide a suitable TLB, otherwise a light duty tool will be provided while the work is taking place under extreme difficult conditions.

Failure to understand the actual technical specifications may result in bidder's non-compliance with specifications in terms of what is submitted and not necessarily the ability of the bidder (Loader, 2013). For these reasons, it is vital to test bidders' understanding of the technical requirements as called for on eThekweni Electricity tender documents. This should be tested both on eThekweni Electricity employee's perspectives and on bidder's perspectives. It may happen that bidders think that they have understood the requirements whilst the opposite hence the eThekweni Electricity Employees, that is, the Engineers who assess the bid documents may be able to tell/advise if the contractors/bidders really understand the tender requirements.

2.5.2 Technical requirements compliant

Vijay (2017) states that the success of any project specifically on the construction sectors depend on critical evaluation of vital factors which include the contractor's experience (proven track record) and contractor's resources (tools, equipment and staff competencies/skills). Compliant with technical specification is important in the selection of the best contractor to ensure delivery of service. Ron Watermeyer (2000) indicates that the bidder who meets the stated bid requirements including sufficient ability to deliver the required service, products or asset at the lowest price is normally awarded the contracts. In support is Cheaitou et al. (2018) who states that over and above the lowest bid price, contractors should be selected carefully based on the minimum set of requirements. However, these requirements are considered by small companies to be set at very high when one considers the actual scale and value of the contract (Loader, 2015). The Discriminant Function Analysis is one of the methods used to evaluate bidder's compliance with technical specifications (Vijay, 2017).

The fundamental reasons of having some minimum qualification criteria in the contractor selection or evaluation process is to manage risk and increase quality. As stated by Cheaitou et al. (2018), risk exposure is very high at procurement stage, hence a need to properly select the best suitable contractor. Risks include project failure, over expenditure, poor quality and failure to achieve value for money. In support is Vijay (2017) who also indicated that the main objectives of having a selection process for the appointment of contractors is to reduce failure risk of the project and maximize output quality while maintaining strong relationships between all stakeholders. One of the fundamental risks on many infrastructure related contracts is project overrun which results in cost overrun.

During the review of literature, four main list of technical requirements were identified on bid or tender specification to assess the bidder or contractor's capability to deliver the required services. These are (a) The bidder or contractor's experience (proven track record), (b) Experience of the bidder's resources in terms of key personnel (human resources), (c) Qualification of the bidder's resources in terms of key personnel (human resources), (d) Bidder's tools and equipment. These four technical requirements will be discussed below with the bidders resources qualification and experience combined together. The review of literature on bidders compliant with contract or tender specification requirements was initially conducted by searching for available literature within SMMEs studies, however not much information is available. Previous studies conducted so far which were used to discuss these subjects are on the general need to have minimum set of requirements on tender specifications to ensure that the awarded contractor or bidder is capable of delivering the required service/s. This study will have to test the requirements within the context of SMMEs barriers using eThekwini Electricity environment.

2.5.2.1 Proven track record or experience of bidders

Proven track record or experience of the bidder or contractor is one of the tools used to determine the capability of the contractor to successfully deliver the required service. This requirement includes requesting the bidders about related work completed by them including the value of such work. Experience is expressed in a form of a number of successful completed project of a similar nature (Quinot, 2014). Many studies have been completed on causes of project overrun or cost escalation such as the study done by (Ullah, Abdullah, Nagapan, Suhoo, & Khan, 2017) in Malaysia and (Marzouk & El-Rasas, 2014) in Egypt where it was determined that contractor lack of experience is at the top list on the causes of project overrun. In support is Nguyen and Chileshe (2015) on the studies of BRICS countries. As part of avoiding project overrun which generally results in disputes and litigation, tender specification call for a minimum experience for bidders (Hisham & Yahya, 2016). It is observed by the researcher that a number of bid document at eThekwini Electricity call for bidders to have at least a minimum of five (5) years' experience on similar projects. Basically the rule is that if the company has done such work before, there is a possibility that the company can be able to do it again. Bidders are then required to submit track record in a form of a number of projects completed and demonstrate their experience on performing similar project.

Loader (2015) found that the need to demonstrate proven track record by the bidder can deter SME (SMMEs) from participation on public procurement. This does not necessarily mean that the company does not have the required experience but it may be lacking the necessary skills or understanding of how to demonstrate such track records. SME may lack the necessary resources to demonstrate this because they are mostly owner managed, there is no designated person responsible for writing the required documentation.

Other arguments on this subject include the idea that even though the bidder may not have the necessary experience, the individuals within the company have such experience from their previous jobs while working for other big companies. For this reason the use of bidders' experience as a form of determining the bidder's future performance capability is being criticised. A need exists that these requirements should be tested within this study to determine if it is a barrier for SMME access to eThekweni Electricity procurement services.

2.5.2.2 Contractors human resources – key personnel qualifications and experience

Another critical factor that is considered on contractor selection criteria is the competence of the contractor's employees called key personnel. This includes qualifications, competencies, expertise and experience. Ramli et al. (2018) state that in order to ensure that projects are completed on time, within budget and quality, both experience of the contractor and experience of personnel is required. Having experienced personnel also assist with effective project management. Ramli et al. (2018) study on project delays discovered that poor qualification of technical personnel is on the top five (5) factors that cause project overrun. In support of this view is a study by Van, Sang, and Viet (2015) which also discovered that contractor's human resources is one of the reasons for project delays. It is therefore important for bidders to call for minimum level of expertise as a selecting criteria for compliant bidders.

Comprised in eThekweni Electricity bid specification is the call for submission of the contractors proposed employee's resources (key personnel) to be assigned to the project. Minimum criteria are set on what minimum qualification and experience the proposed key personnel should have, failure which will lead to the bid being considered materially divergence which results in bid disqualification (non-responsive). Key personnel are the contractor's employees that will play a critical role in the project, this includes a person occupying responsible position such as a Project Manager, Construction Manager, Site

Supervisor, Safety Manager and Health and Safety Officers. Some expertise that bid documents specification called for are standard such as qualification and experience within the field of work. However, other requirements are as specific as calling for the bidder's key personnel to have eThekwini Electricity training and competency certificate, which is only obtainable at eThekwini Electricity. For these reasons, there are concerns that such requirements may be unfair. Such specific requirements disqualified other candidates who may have done similar work with other clients. An example is a candidate who has been responsible for electricity connection work for a Municipality in another location and now the employee wants to perform similar work at eThekwini Electricity. The candidate is disqualified as a result of not acquiring the eThekwini Electricity competency certificate.

2.5.2.3 Contractors plant, tools and equipment

In addition to the contractor's ability to have the required quality and quantity of human capital, the contractor shall also have the required plant and equipment to deliver the required service. Ogunsemi and Aje (2006), a study in Nigeria found that the availability of plant and equipment was one of the most important criteria used to assess contractor's ability to render the required service. Contract specification sets minimum requirements for bidders to comply with. Even though the requirements is available to ensure that the required service is delivered, it has a potential to be a barrier. This requirement need to be tested on whether it contributes positively or negatively within the framework of SMMEs to access public procurement.

2.5.3 Barrier of contract size or capacity

Loader and Norton (2015) found that the challenges faced by SMMEs during the tendering stage include the fact that contract are advertise in large volume of work, hence deter SMMEs from tendering. Claims are that such contracts are too large for SME to manage (Loader, 2015). When contracts are large in terms of volume, the issue of capacity comes in. This is a result of large volumes of work which make it difficult for SMMEs to have the variety of skills and resources required not to mention the required upfront capital (Loader & Norton, 2015). The big scale project force SMMEs to subcontract but most SMMEs do not prefer this option as it minimise their influence and results in delay payment and reduce profit margins (Loader & Norton, 2015).

A number of calls have been made to unbundle contractors to small manageable size to afford opportunities to more bidders. However many times such calls are not adhered to because it increases management on the part of the public officials. The contract technical requirements set on tender specification are related to the contract size or value. Basically the larger the contract, the more need for the appointed contractor to have the necessary expertise and use specific plant and equipment to execute the work. The size of the contract also influence the call for minimum track record, specific expertise in the case of key personnel including the availability of minimum quantity of personnel. For this reasons, this requirement has been considered critical with the need to be tested within the environment of eThekwini Electricity.

2.5.4 Complaint with general standards and regulations

Submission of Safety plan indicating compliant with regulations is one of the requirements that is called for during contractors selection (Wilbanks, 2018). Safety is a primary concern to various organisations. Contractors are therefore required to submit their health and safety plan. However, as important as it is, this need to complying with statutory legal specifications and standard such as Health and Safety is considered a barrier to SMMEs access to public procurement (Loader, 2015). Although this requirements is important, it is also considered general in that it applies to all infrastructure construction related projects and not in a particular field. For example, documentations required on Electrical Engineering projects are similar to the documentations required on a Civil Engineering related projects. For this reasons, even though this barrier has been considered, it is not directly tested on this study, however it is tested under the general understanding of eThekwini Electricity's Engineers and Clerk of Works about the need to set minimum requirements on contract specification.

2.5.5 Policy understanding

Available policies including legislation can facilitate SMMEs access to procurement services but can also create the undesired barriers. This is because the development and adoption of policies does not necessary bring the desired change in public procurement, for change to occur, public buyers need to understand the policies and acts or apply them daily (Flynn, 2018). Georghiou, Edler, Uyarra, and Yeow (2014, p. 10) observed that “procurement policies are owned by ministries and agencies but their successful implementation ultimately depends on the initiative of public buyers”.

Assumptions are generally made that public servants possess the required knowledge, skills and understanding and desire to implement policies, however such assumptions may not necessarily be correct (Blount & Hill, 2015). Of similar view is Tummers, Bekkers, and Steijn (2009) also indicated that assumption is made that public servants will have the same sense of ownership required to implement the policies. In addition Tummers et al. (2009) have raised the issue that public servants may experience conflicts between implementation of the policies with existing commitment to the organisation and clients.

The problem may not only be due to public buyers' lack of understanding of policies but it may also relate to unwillingness to implement such policies (Flynn, 2018). This includes public servants who are responsible for procurement's poor opinion about the policies (Loader, 2015). Flynn (2018) on the study of SME-friendly policies discovered the attributes of the individual buyer including the organisational context has an effect on successful implementation of SME-friendly policies. It is therefore critically important that policies as developed and adopted by government gain the required support of responsible public servants in order to succeed. This may need active engagement with the relevant personnel.

Failure to understand policies by public officials has an impact on how contract specifications are transcribed. Once those specifications are written, it is impossible to deviate from the stated minimum requirements and accept a bid that does not meet such requirement as it may be unfair to other potential bidders. Policies such as targeted procurement, BBBEE, SMMEs development need to be considered during the contract specification development stage of procurement. Individuals responsible for the procurement of goods and service including the management of service delivery need to understand the various challenges faced by SMMEs during the life cycle of the procurement process, hence create SMMEs friendly approach when developing project contract specification (Akenroye & Aju, 2013).

A need to assess public officials is identified, in this case eThekweni Electricity Engineers and Clerk of Works' understanding of the role of public procurement within SMMEs development and on the economy.

2.5.6 Barrier of unfair bid evaluation

Akenroye and Aju (2013) argue that unfair bid evaluation with limited transparency is also considered as barrier for SMMEs. Loader and Norton (2015) state that procurement processes have many obstacles and red taps. The evaluation is sometimes not clear for the bidder's perspectives. Previously the process used to be simple in that the lowest bid price was awarded but now there are many set of requirements prior to the contract being awarded. Contract award to the cheapest price is no longer applicable, now one need to consider the overall costs, quality as well as the long term impact of the decision (Loader & Norton, 2015). For this reason, bid evaluations are now complex with limited transparency. This issue is one of the possible identified issues that are considered a barrier for SMMEs access to procurement services but not tested under study.

2.6 Available pro-SMMEs development mechanism

The South African government continuously introduces policies and strategies to support SMMEs specifically the Department of Small Business Development, Department of Trade and Industry (DTI) and National Treasury. The Green Paper of Public Procurement Reform: Notice 691 of 1997 called for the stimulation of local industries through contract strategies, packaging of contracts and affirmative procurement practices (Ministry, 1997). As an intervention from the government to try to address the inconsistency in tender document preparation, the Construction Industry Development Board (CIDB, 2015) developed the standard for uniformity in construction procurement documents. This document is compulsory for all government infrastructure related tenders to comply with. Rogerson (2004) argues that a contract should be structured in a manner that encourages SMMEs' maximum participation without compromising time, cost and quality. This is one of the reasons CIDB still encourages joint ventures and subcontracting to be provided with better access for SMMEs. Perry (2011) also supports the idea of subcontracting and collaboration with large companies as a way for SMMEs to gain access. However, even though subcontracting is still realised as a tool for development, other SMMEs prefer to supply directly to government, citing the issues of non-payment (Loader & Norton, 2015).

Another recommended action is to divide immense contracts into specific manageable small contract hence allow SMMEs to bid for a smaller portion. This also assist with CIDB grading regulations that prohibit companies to be awarded contracts with the value above their CIDB grading. Perry (2011) agrees that dividing contract improve chances of SMMEs winning of tender. These is supported by Rogerson (2005) who discovered that the value of work if too large makes it difficult for SMMEs to bid. Loader and Norton (2015) emphasized that using manageable lot, SMMEs can have a better opportunity to win a contract and also be able to perform. This is supported by both the SAICA (2015) and Ron Watermeyer (2000) studies which calls for unbundling of contracts.

The need to develop and implement SMMEs friendly policies is not only desired by South African government, other countries have also identified this need. An example is as indicated on Flynn (2018) study which states that Ireland developed and issued a circular title “Facilitating SME Access to Public Procurement”. This is also supported by the European Code of Best Practices Facilitating Access by SMEs to Public Procurement Contracts says Flynn (2018).

Another option is setting certain value of work such as the 30% rule for SMMEs. Ron Watermeyer (2000) states that setting aside specific value to SMMEs as a contract participation goal is another mechanism to increase SMMEs participation. Setting aside a specific percentage is not a new concept, the UK government announced the plan to spend 25% on SME in 2015 financial year (Loader, 2015). Currently eThekweni Municipality is insisting that all contracts should have Contract Participation Goal (CPG) where appointed contractors are required to subcontract a specify percentage of work to local small contractors. For contract above R10 million this percentage is 30%. Such decision is supported by Rogerson (2004), the author states that reservation of specific value of work for SMMEs will improve access. Pipe (2011) is in agreement with setting targets for proportion of contracts to be awarded to SMMEs.

2.7 eThekweni Electricity procurement

As required by the Preferential Procurement Policy Framework (Act no. 5 of 2000), eThekweni Municipality has developed the Municipality Target Procurement Policy. This Policy states that the Municipality is committed to the fast tracking of the Growth and Ensuring Sustainability of SMMEs (eThekweni, 2003). The intention of the policy is to support local economy and fight against the triple bottom line challenges. In addition, the Municipality has recently adopted a Radical Economic Development Framework which seeks to empower local companies using procurement (eThekweni, 2018). Procurement for Construction and maintenance of eThekweni Electricity infrastructure such as High Voltage Substations, High Voltage Powerlines, High Voltage Cables, Medium and Low Voltage network can actually develop SMMEs and in turn create local employment and build local economy. It will allow the use of local labour and ensure that money is circulated within the Municipality.

At eThekweni Electricity, Engineers are responsible for all infrastructure development and construction projects. Electrical Engineers are involve in the entire process of procurement from the needs analysis, tender specification compilation, tender evaluation and contract management. As a result of their involvement in the entire procurement process the Electrical Engineers have been identified in this study to play a critical role on the implementation of the targeted procurement policy.

At inception of the projects, the Engineers conduct market research to identify the available and cost of the required services. The Engineers then prepare technical specifications of the required services. Specifications are mainly written in terms of value for money about the performance of the required service not considering other socio-economic issues. Researchers Manchidi and Harmond (2002) found that officials tend to be confused about procurement policy goals and choice of implementation mechanism which results in failures. In addition Rogerson (2004) also recommends the need to make municipal officials more aware of the intentions of the new procurement regime in order to avert malicious compliance.

In the initial stages of the project, one can identify which of the required services can be obtainable from SMMEs and which can be obtained from established enterprises. It may also be possible to identify and determine the quantity of local labours that can be used. This is one of the reasons why International Labour Organisation (ILO) stresses the importance of adopting a labour-based approach and technology which is aimed at applying a labour/equipment mix that gives priority to labour (Rogerson, 2004). The knowledge that the Engineers have about SMMEs development can assist on how the technical tender specification can be drafted to achieve the required goals. Consideration of SMMEs opportunities during the tender document preparations, can be created even if it is through joint ventures or subcontracting. Compliant to the technical and/or functionality of specification is the first line of assessment that is used during tender evaluation and SMMEs can fail to pass through this stage.

Technical and/or functionality requirements can include items such as relevant experience of the enterprise, and personnel, minimum quantity of tools and equipment. Some of these requirements can be adjusted to provide an opportunity for SMMEs without compromising quality. Loader and Norton (2015) suggest that when faced with dilemma, procurement practitioners are more likely to prioritise efficient and value for money rather than the additional objectives such as SMME development. Even the Bid Specification Committee which evaluates all tender specification prior to advertisement are not in a better position to understand the technical and/or functionality specification than the Engineers. The Bid Evaluation Committee which assesses the fairness of the evaluation does query the reasons for award or non-award recommendations but at that time it is too late as the evaluation is based on compliance to the initial tender specification before price is considered. It is therefore reasonable for public officials to engage stakeholders such as SMMEs before contract specifications are drawn. Pipe (2011) argues that improving communication between buyers and bidders create successful project implementation. This is also vital during the project implementation stage as this is what ensure sustainable development of SMMEs. Such will build the SMME capacity (Pipe, 2011).

2.8 Summary of Literature Review

2.8.1 General

The literature review has shown various studies conducted on the subject of SMME/SME. Subjects covered were based on SMMEs, procurement within the public sector and contract or tender specifications. In-depth discussions on the role or importance of SMMEs in the economy, the reasons why SMME should play a centre stage on the country's economy was also done. Furthermore, a discussion on the role of procurement to deliver services to the public and facilitates development of SMME was also discussed.

The literature has also shown that due to the critical role that SMMEs play in the economy various studies have been conducted to determine challenges that SMMEs faced including barriers for SMMEs to gain access and develop through public procurement. Contract specification has been identified as one of the barriers for SMMEs access to public procurement. Currently available efforts by various governments on the facilitation of SMMEs access to public procurement has also been discussed including the development and adoption of various SMMEs friendly policies.

2.8.2 Research gaps

It has been noted by the academics that even though many studies have been done on the subject of SMMEs barriers including the identification that contract or tender specification is a barrier, there is a need to drill deeper into contract specification as a barrier. The need is to identify the requirement/s on contract specification that creates a barrier. Contract specification has a number of components and without looking at those various components it may not be easy to identify the real problem and resolve it. For these reasons, there is a need to look at the component of contract specification and identify the most contributing components. These include the general understanding and compliant to technical specification, experience of bidders, bidder's key resources qualifications, competencies and experience.

It has also been noted that previous studies such as those done by Anthony Flynn and Kim Loader, the key authors in the subject has been mainly done in the Civil Engineering sector such as roads and buildings construction related projects. This sector employ large quantity of low and semi-skilled labour. Research in the field of Electrical Engineering related projects such as High Voltage and Medium Voltage energy delivery infrastructure development project is missing.

In addition, available studies are of high level, looking at broader SMMEs barriers which will provide assistance mainly for policy makers such countries executive which include ministers. Looking at specific issues or component/s of contract specification provide an opportunity for Heads of Departments to intervene as it is now dealing with project administrator's roles on the implementation of the policies. These are experts in the fields and develop the technical requirements for projects. Further, the experts manage the day to day implementation of projects. Every tenderer needs to comply with the technical requirements, hence the individuals have an important role to play. This study plan to close these gaps by focusing on the responsibility of experts of Engineers to develop technical requirements that can be utilized and that are pro-SMMEs sustainable development.

This study will also link the tender minimum qualification criteria set on contract specification with the provision of SMMEs' access to procurement services. The aim of setting minimum qualification criteria on contract specification is to ensure that the project at hand is successfully delivered on time and within budget as well as with the acceptable quality. On the other hand, SMMEs policies aim to provide development through procurement. Studies conducted so far does not link the two. The studies conducted on the need and use of contract specification to set minimum qualifying criteria are conducted with the need to deliver a successful project that is cost effective and within budget. On the other hand studies conducted on SMMEs' access to procurement services focused on SMMEs development access issues hence listed contract specification as a barrier with no consideration that those requirements are set so that a successful project can be delivered.

This study will link both SMMEs' access to procurement services and the need to set minimum requirements on contract specification to ensure project success together into one study. Combining the two will assist organisations' management to make decisions that will both provide SMMEs' access to infrastructure procurement services but also ensure that the relevant infrastructure projects are successfully completed and achieve overall service delivery.

2.8.3 Methodological gaps

Various authors have used both qualitative and quantitative studies to conduct studies on the subject matter. However, it is noted that existing studies as per this author's knowledge were conducted through using public services buyers as participate as seen on (Flynn, 2018) approach. Public official buyers are generally responsible for applying policy and procedure to procure goods and services as per the organisation supply chain management policies. The Public Official buyers are not responsible for determining service or product compliant to technical specification but these officials are generally responsible for placing orders from already awarded service providers and/or for already accepted product and services. It is the responsible technical competent personnel such as the Engineers in the case of eThekweni Electricity that determines the requirements of the required product and service as well as the actual service provider in a case of infrastructure related procurement. This study therefore differ from other studies' method in that the type of participants used are completely diverse with different responsibilities.

2.8.4 Study focus

The study focused on the experts that are responsible for the development of the requirements called technical specification for infrastructure related project which are the organisation Engineers as well as the individuals that are responsible for the onsite day to day management of the projects which are normally called Clerk of Works. These are the individuals that have a first-hand knowledge of contractor's performance and the compliant of services offered to the contract technical specification. The view of these employees will then be compare with the view of bidders/contractors. This study was the first of its kind done in eThekweni Municipality: Electricity Unit.

2.9 Chapter Summary

This chapter has clearly discussed the available literature on the subject matter. It has also shown the gaps available previous studies both methodological and also the research areas gaps. The chapter has also shown the focus areas of this study with the aim to address both the currently identified research and methodological gaps. The next chapter three (3) will focus on the research methodologies and approach used to conduct the survey of this paper.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design and methodology used in this study with the aim of determining the possibility of contract specifications to be a barrier for SMMEs access to eThekweni Electricity procurement services. This will include the research strategy approach and instruments selected for the study. The study location selection including the selection of participants will be described. The chapter will also discuss the procedure on how the quantitative data will be collected. This includes the development of survey questionnaires and the selection of data collection instruments. The statistical analyses of the collected data as well as the validity and reliability will also form part of this chapter. The chapter will also have the critical discussion on how biasness will be controlled or rather regulated as well as the ethical consideration. This chapter will further discuss the limitation of the study and the study conceptual framework.

3.2 Study Location and Participants

The chosen location of the study was eThekweni Municipality, Electricity Unit (eThekweni Electricity). The interest was on eThekweni Electricity infrastructure procurement and delivery contracts. These include service contracts related to the construction, maintenance and refurbishment of the Electricity Supply infrastructure. EThekweni Electricity was considered a suitable study setting specifically because the researcher was also an employee of eThekweni Electricity and can easily gain access to the required information.

Targeted participants were eThekweni Electricity's bidders, this include companies who previously bided for eThekweni Electricity tenders. Investigation was done on contract advertised and awarded over the past three (3) years for easy of reference. The use of bidders both successful and unsuccessful is because the bidders have at-least on one occasion seen eThekweni Electricity tender document hence will have a better understanding of eThekweni Electricity contract specification including the minimum qualification requirements set for a bidder to be considered responsive.

In addition to eThekweni Electricity bidders, relevant officials of eThekweni Electricity were also randomly selected. The selected officials were Engineers and Clerk of Works. EThekweni Electricity Engineers were selected because they are responsible for writing and/or development of tender/contract specification based on the required scope of works. Engineers conduct needs analysis, and based on those needs they then develop possible solutions including the implementation of those solutions. Part of solution implementation is to procure the relevant goods and services through an approved supply chain management process. This process require a tender/contract specification to be develop which will clearly state the scope of work for the required goods or services including the required type of resources to implement such scope. Resources include material, equipment and personnel. In addition to the required scope of work, Engineers also specify how such services should be delivered through the condition of contract. For these reasons, Engineers are considered critical to the study objectives which is to look at contract specification as a barrier for SMMEs access to eThekweni Electricity procurement services. The Engineers are therefore listed as the main or primary participant of the study. On the other hand, eThekweni Electricity Clerk of Works were also selected as participates because they are responsible for the implementation of relevant procure services. Clerk of Works are basically on the field managing the successful bidders on a daily basis to ensure that the work is done in accordance with the specification. They therefore have a better knowledge on the performance of the bidders.

3.3 Research Design and Methods

The main aim of the study is to investigate and assess if contract requirements/specification is a barrier in affording the opportunity for SMME to become service providers on eThekweni Electricity procurement services and to develop through participation on these services. Tender documents include specifications which outline requirements that are required for tenderers/bidders to meet before they can be considered for the work at hand. These specifications include Contractual Requirements and Technical Requirements. Contractual Requirements are mostly general and similar to all tenders and are easily met, but Technical Requirements are specific to the work at hand. This study focuses on Technical Requirement's effect.

The research design is all about the entire structure of the research to be use which include the type of data, how the data will be collected and analysed. Sekaran and Bougie (2016, p. 95) defined research designed as a “blueprint for the collection, measurement, and analysis of data, based on the research questions of the study”. There are mainly two types of research method or study, which are Quantitative and Qualitative study. The other research type is a mix of the two studies hence it is called mixed-method.

The research methodology adopted for this applied research designed to provide solution to the current situation is quantitative method. Quantitative study is a systematic empirical investigations of a specific subject using known statistical, mathematical and computational tools/techniques in order to answer specific questions (Sekaran & Bougie, 2016). These methodology seeks to address the stated objectives through survey questionnaires. Quantitative is chosen because it is a scientific way of obtaining results about the problem and afford an opportunity for the discovered results to be generalised. Unlike qualitative study which will only provide a general understanding of the problem.

The study is descriptive in nature. Basic information about the subject matter is known. This is because tender specification is listed amongst the barriers of SMMEs, however what is not known the specific barrier considering that contract specification consist of a number of requirements. In addition, on the list of contract specification requirements it is not clear about which requirement has a major influence, as well as how the influence occurs. For these reasons, the main purpose is to described the situation by gaining accurate profile of this phenomena (Saunders, Lewis, & Thornhill, 2016).

The method used in the study is a survey nature. According to Creswell and Creswell (2017, p. 155) “survey design provides a quantitative or numeric description of trends, attitudes, or opinions of a population by studying a sample of that population”. The study allowed the researcher to generalise and drew some conclusion about the population. Survey data was gathered within a period of about six (6) weeks. For these reasons this is a cross-sectional study.

Data recovered from the research instruments form the essence of the primary data needed for the study.

3.4 Research paradigm

The study was conducted so as to determine the current organisation practices in relation to the development and application of contract specification and how those practices affects SMMEs access to procurement services. For these reasons, the study was considered to be within the radical change perspective. Saunders et al. (2016) considered a radical change research approach to be a visionary and utopian study concern with providing organisation solution to existing problems with the view of changing existing status core.

3.5 Study setting

The study was conducted with the participants on their respective natural environment. This type of setting is called non-contrived setting. According to Sekaran and Bougie (2016) this type of correlational study is called field study. Studies conducted in an artificial settings are called contrived settings. For this study it was important to allow participant to be at their own comfort zone when answering the questionnaires so that there will be no interference from the researcher. Surveys involve a representative sample of the population using a technique such as a random sampling. A questionnaire was given to each member of the sample at eThekwini Municipality (Engineers and Clerk of Works) and used to infer characteristics of the whole population.

3.6 Population and sample

The targeted population of this quantitative study was 318. This population consisted of 98 eThekwini Electricity employees who were Engineers and Clerk of Works. This population consisted of individuals who were directly responsible for contractors by either developing contract technical specifications or requirements and/or managing delivery of the required service. As per the June 2018 employment figures obtained from the company Human Resources Department, there are 48 Engineers and 50 Clerk of Works. The remainder of the population consist of 220 companies who had bided for eThekwini Electricity service tender/s that are awarded over the past 3 years. Off the 220 companies, 82 of them have been successful at least once. The list of companies was obtained through the analyses of eThekwini Electricity tender records of the past three (3) years obtained from the organisation Supply Chain Management Department.

The most widely used and acceptable method of sampling that of Krejcie and Morgan will be used in this study. According to Krejcie and Morgan's Table for finite population for a

population of 98, adequate sample size was 80 as per table below 3-1. Using proportional stratified random sampling method, the sample is as follows:

Table 3-1: Participant population proportion and sample size for eThekwini Electricity employees

Employees category	Population size	Population Proportion (%)	Sample Size of 80
Engineers	48	49	39
Clerk of Works	50	51	41

As per eThekwini Electricity June 2018 contract data base obtained from the company Supply Chain Management Department, there were a total of 55 service (labour inclusive) contract awarded over the past three (3) years. A three (3) year assessment was done because the longest contract available is three (3) years. A detailed assessment of each contract was done and data were populated as follows; a total of 220 companies bided for work. Of the 220, 82 have been successful at least once. Initially the sampling size was 302 bidders. However, during the sampling method it was discovered when some email addresses were selected that the bidders were not actually 302 but 220. What made the number to be 302 is the inconsistency on recording data. Bidders who bided more than once, on one contract file the name of the bidder will be recorded using a trading name instead of the actual company name, while on another contract file the records are captured using the company primary name, hence a duplication of count. Another correction was the repeat of companies who bided on one contract individually, while on another contract the bid was a joint venture. Such resulted in bidders being captured as three (3) instead of two (2). According to Krejcie and Morgan's Table for finite population for a population of 220, a sample size is 140 as per table 3-2 below. Using proportional stratified random sampling method, the sample was as follows:

Table 3-2: Participant population proportion and sample size for eThekwini Electricity's bidders

Companies category	Population Size	Population Proportion (%)	Sample Size of 140
Successful bidders	82	37	52
Unsuccessful bidders	138	63	88

The total population of the study was 318 and the sample size was 220.

3.7 Sampling Strategy

Generalizability of results is important on this study hence probability sample was applied, instead nonprobability sampling which cannot be easily generalised. This study employed a proportional stratified random sampling method. The strata for eThekwini Electricity employees consisted of 48 (49%) Engineers and 50 (51%) Clerk of Works. The strata for contractors/potential contracting companies consist of 82 (37%) of companies who have done business with eThekwini Electricity and 138 (63%) who had tried to do business with eThekwini Electricity.

3.8 Data Collection Strategy

This study is a mono method quantitative study in that it used a single method of data collection strategy in order to achieve the desired results. The strategy used was that of a survey strategy. This strategy allowed for the economical collections of standardised data from the chosen population. Although data collection at various times and location may provide an added advantage in terms of more reliable results, this option was not chosen due to time and resource constrain.

The literature review indicated on available data factors that forms part of contract specification requirements. The data collection purpose was to collect the required data that assisted in answering the research questions. Data collections methods were in a form of survey questionnaires. Questionnaires were administered through a survey websites to eThekwini Electricity employees that were responsible directly and indirectly for contractors, either through the development of contract specifications and/or the management of contractors during the execution stage of projects. In addition, a similar questionnaires was administered to companies, mostly SMMEs who had attempted successful or not to provide contract services to eThekwini Electricity over the past three (3) years. The three (3) years was used because the longest contract that eThekwini Electricity had three (3) years and most contracts were on continuous repeated basis.

A set of questionnaires were developed based on information gathered through the literature review. Two sets of questionnaires were created. One for eThekwini Electricity employees and another for eThekwini Electricity bidders.

The questionnaires for eThekwini Electricity consisted of three (3) sections. Section A had five questions which were about basic information about the participant such as gender, race, responsibility and experience. Section B had six questions about the participant's knowledge of procurement and the need for procurement. These questions was about the first research objective which was to determine eThekwini Electricity's understanding of the role of public procurement. Section C had six questions about the contract specification barriers to SMMEs, these questions aimed at responding to the second objective of the study which was to determine if current eThekwini Electricity's contract requirements/specifications are a barrier for SMMEs access to procurement services. The last section, Section D had six questions which aimed at dealing with the third objective of the study which was to determine the impact of pro-SMMEs contract specifications on the successful delivery of procurement services.

The second sets of questions which were designed for eThekwini Electricity bidders had three Sections. Section A had four questions about the background of the participant company, such as the company itself, the number of times the company bided and if there was any success. Section B had six questions which were similar in nature to Section C of eThekwini Electricity employee's questions which aimed at dealing with the study's second objective. Section C had six questions similar to Section D of eThekwini Electricity employees' questions which aimed at dealing with the third objectives in the bidder's point of view. It should be noted that there were no questions for eThekwini Electricity bidders about the first study objectives because that specific objective had to do with eThekwini Electricity's employees' understanding in the need for procurement services.

Likert Scale was used to rank the participant's view on each questions. Likert Scale is a universal method of collecting data that is easily understood by participants, it also easily provide the extent at which one agree or disagree with an issue hence allowing rating. There were 5-point scale ranging from "Strongly Disagree" on one end to "Strongly Agree" on the other end with Neutral in the middle. Each agreement for questions considered to be positive was tabulated in a scale of 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree and 5 = Strongly Disagree with reverse for questions that are considered to be negative.

3.9 Data Analysis

Survey questionnaires were administered through a web base survey and a link was emailed to all individual participant. Individual response were recorded in a master Excel spreadsheet and imported to the Statistical Package for the Social Science (SPSS) for analyses.

The study questionnaires included nominal, ordinal and interval data. Nominal scale assisted on analysing data qualitatively, distinguishing of groups by categorizing them into mutually exclusive and collectively exhaustive sets. Ordinal scale to rank-order the preferences. The interval scale allowed the measure of distance between any two points on the scale (Sekaran & Bougie, 2016). Mode and frequencies were used to analyse the ordinal and nominal data such as race, gender and company type (SMME or not SMMEs).

The interval scale data which consisted of the Likert scale data were coded by a number from 1 to 5 ranging from strongly disagree to strongly agree. This data was analyse using mean for Central Tendency and Standard deviation for variability (Boone & Boone, 2012). The associations were then analysed using the Pearson's *r*. All these analysis were done for each category of participate such as Clerk of Works, Engineers, Successful bidders and unsuccessful bidders.

In addition, it was critically important to individually analyse each type of barrier and rank them. The type of barriers are those that were tested by the second research objectives which are Section C questions on the employees' questionnaires and Section B on the bidders/contractors questionnaires. The six independent variables tested were Specification Ambiguity, Bidder's experience (track record), Key personnel qualifications, Resources (Tools, equipment and material), Key personnel Experience and Contract size/value. These were analysed individually and compared against each other so that the barriers were ranked from the highest to the lowest. Even though all participants' view on these items were tested, a special attention was on the Engineers because they were the primary participant in this study.

3.10 Reliability and Validity

Reliability and validity is about the test of goodness of measures. Reliability tests the stability and consistency of measurement while validity tests if the correct concept was measured (Sekaran & Bougie, 2016). There are two types of validities, that is, internal and external validity. Internal validity refers to the test and external validity refers to the ability to generalize findings to the targeted population (Sekaran & Bougie, 2016). The research kept records of all steps taken including procedures for sampling. The coefficient alpha or Cronbach alpha were used to test and score goodness of measure.

3.11 Ethical Consideration

Ethics was a key aspect in this study. Ethical consideration is about knowing what is right and wrong. Ethics is governed by the moral principles and values of the person (Werner & Bagraim, 2016). This study researcher is a registered professional engineer as per the Engineering Council of South Africa and subscribed to the professional code of conduct. These has allow the scholar to keep to the promise in terms of confidentiality, specifically with respect to the eThekweni Electricity employees' confidential information. The SMMEs representative were also considered to be respectable business people and were afforded the same recognition. Participants were assured that information obtained was solely for the purposes of this study and is to understand the problems so that in turn mechanism can be in place for economic development. Personal confidential information were treated confidential.

Prior to data collection, approval was sought from eThekweni Electricity Head and ethical clearance was obtained from the University of KwaZulu Natal.

3.12 Conceptual framework

Grant and Osanloo (2014) considered theoretical framework to be related to an already existing and acceptable theory (theories) within literature that has already been tested and validated by researchers or various scholars. On the other hand, there is a possibility that from existing theory a researcher can have a view on a specific research that needs to be explored. This includes an identification of various Independent Variables and Depended Variables including the predicted relationship between those variables. This is called conceptual framework or model. Conceptual framework is about the researchers ideas on how the concepts (variables) are related to each other (Sekaran & Bougie, 2016).

The conceptual framework of the study as developed from literature review can be explained according to Figure 3-1 below.

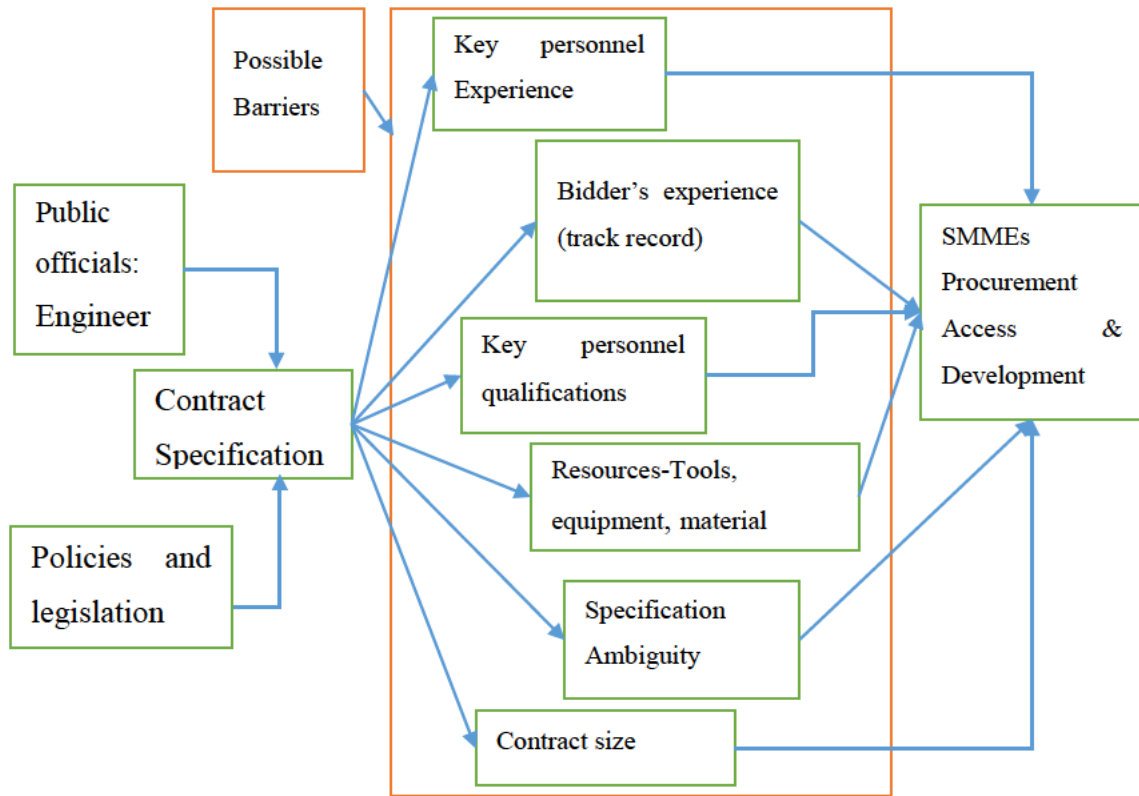


Figure 3-1: Diagram indicating the study focus components of contract specification.

Study framework indicates that public officials have a responsibility to apply available policies and legislations to the development of contract specification that can result in SMMEs accessing public procurement services. However, the developed contract specification can also create barriers for the SMMEs. The barriers include specification ambiguity, contract size, and the requirements for contractor/bidder's experience/track record, key personnel experience, key personnel qualifications and competencies, and resources to perform the work such as tools, equipment, and material.

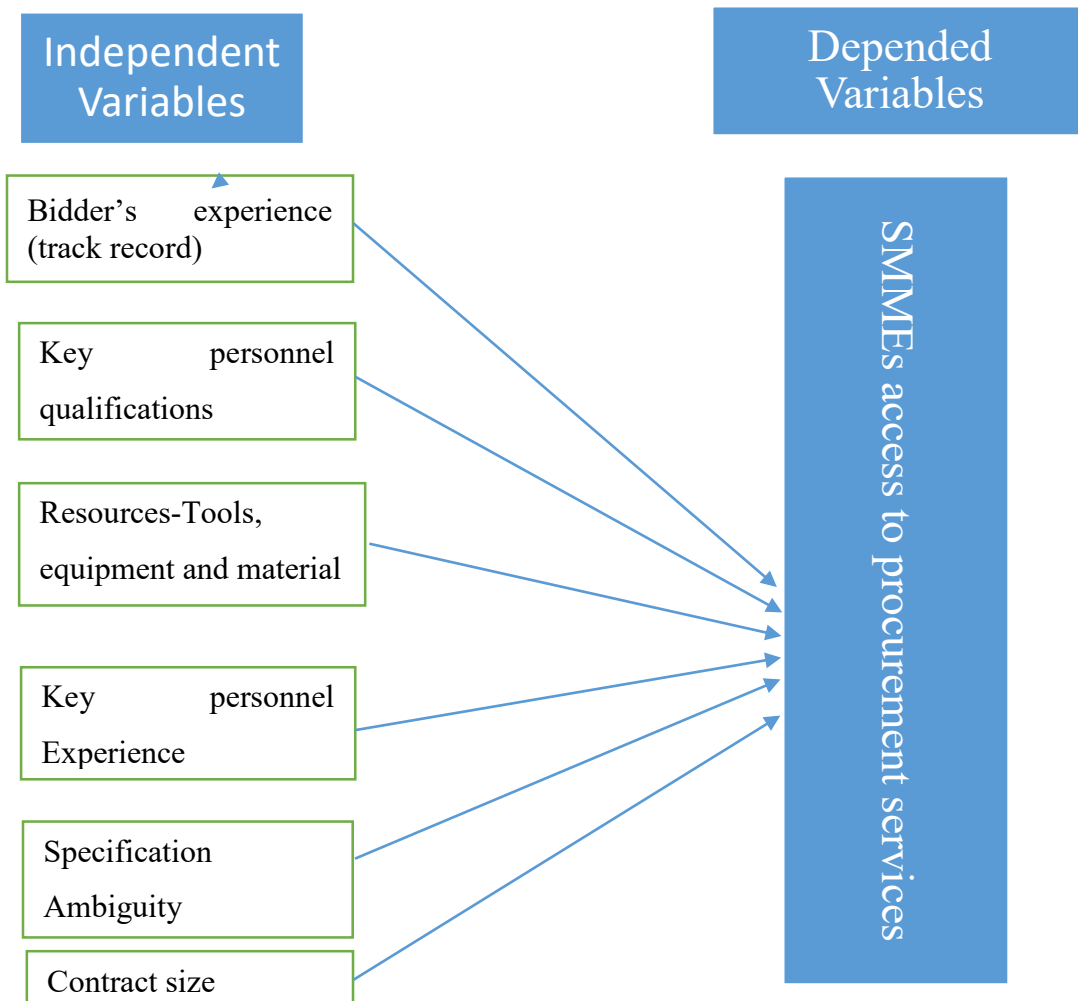


Figure 3-2: Conceptual framework indicating independent and dependent variables relationship

3.13 Summary of the Chapter

The chapter has described the types of research methodologies used in the study. This included the research strategy approach and instruments selected for this study. The study location selection including the selection of participants were also described. The chapter has also discussed the procedure on how the quantitative data was collected and analysed. This include the development of survey questionnaires and the selection of data collection instruments as well as analyses instruments.

The next chapter four (4) will present the analysis in a form of graphs and tables and discuss the findings.

CHAPTER 4 PRESENTATION AND DISCUSSION OF RESULTS

4.1 Introduction

This Chapter is about the presentation of results obtained from the field study as well as the discussion of those results. The results gathered from the survey study will be presented after which there will be an analysis, firstly is a descriptive analysis followed by inferential statistics. The results are based on the study of a total population of 318. Of the 318, 98 were participants of eThekwini Electricity Employees which consisted of Engineers and Clerk of Works. The remaining population is 220 eThekwini Electricity bidders/contractors. The Engineers were considered primary participants due to the nature of their work in relation to the study.

The results obtained was from a website based survey questionnaires gathered over a period of six (6) weeks. The questionnaires given to the sample of population consisted mainly of Likert scale questions. The results were analysed based on three (3) constructs linked to the research objectives or questions, (1) EThekwini Electricity's understanding of the role of public procurement in the economy, (2) The test of whether the mandatory technical requirements stated on contract specification create a barrier for SMMEs access, (3) Test if service delivery will be compromised should the mandatory requirements were pro-SMMEs type.

4.2 Study survey information

Table 4-1: Indication of study survey data and response rate

Participants category		Population size	Sample Size	No. of received response	Percentage of received responses
EThekwini Electricity employees	Engineers	48	39	32	82%
	Clerk of Works	50	41	19	46%
EThekwini Electricity Bidders	Successful bidders	82	52	37	71%
	Unsuccessful bidders	138	88	21	24%
Total		318	220	109	50%

Table 4-1 above indicates the details of the study data. The table shows that out of the population size of 318, a sample of 220 was randomly chosen. Of the 220 participants who received questionnaires' only 109 responded which is about 50%. The highest response rate was the primary participants of eThekwini Electricity Engineers which had about 82%, followed by bidders who were successful to be awarded eThekwini Electricity contract at-least once. The response for eThekwini Electricity Clerk of Works was 46% while the unsuccessful bidders has been poor at 24%. The overall 50% response is not too bad for the study to be generalised specifically considering that the response from the primary participants has been very good, however the results of the bidders are falling short and may not be reliable.

4.3 Descriptive statistics

4.3.1 Background information

4.3.1.1 EThekwini Electricity Employees

The analyses of the background information for eThekwini Electricity employees is under employee's gender, race, experience, responsibility and the employee's participation on contract work.

Figure 4-1 below shows a gender representation of participants. Majority of participant in the case of eThekwini Electricity employees which are Engineers and Clerk of Works were male. Of the respondent, 42 were male which account to 82, 35% while 9 were female which accounts to 17, 65%. This is not surprising considering that the Engineering sector is still dominated by man.

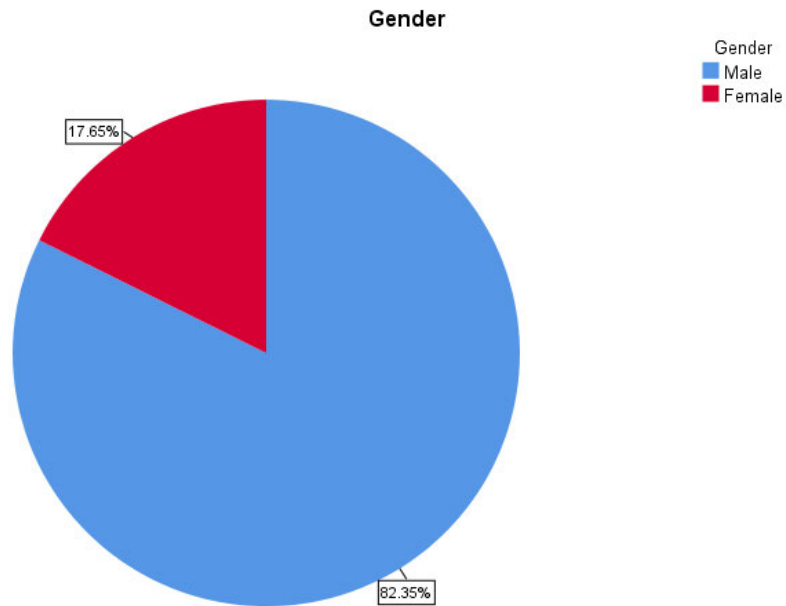


Figure 4-1: A description of male versus female of employee’s participants

Figure 4-2 below indicates the race proportion within the responded participants. The majority of participants were African (60, 8%) followed by Indian (29, 4%). The white and coloured consist of the remainder of the participants’ race at 5, 9% and 3, 9% respectively.

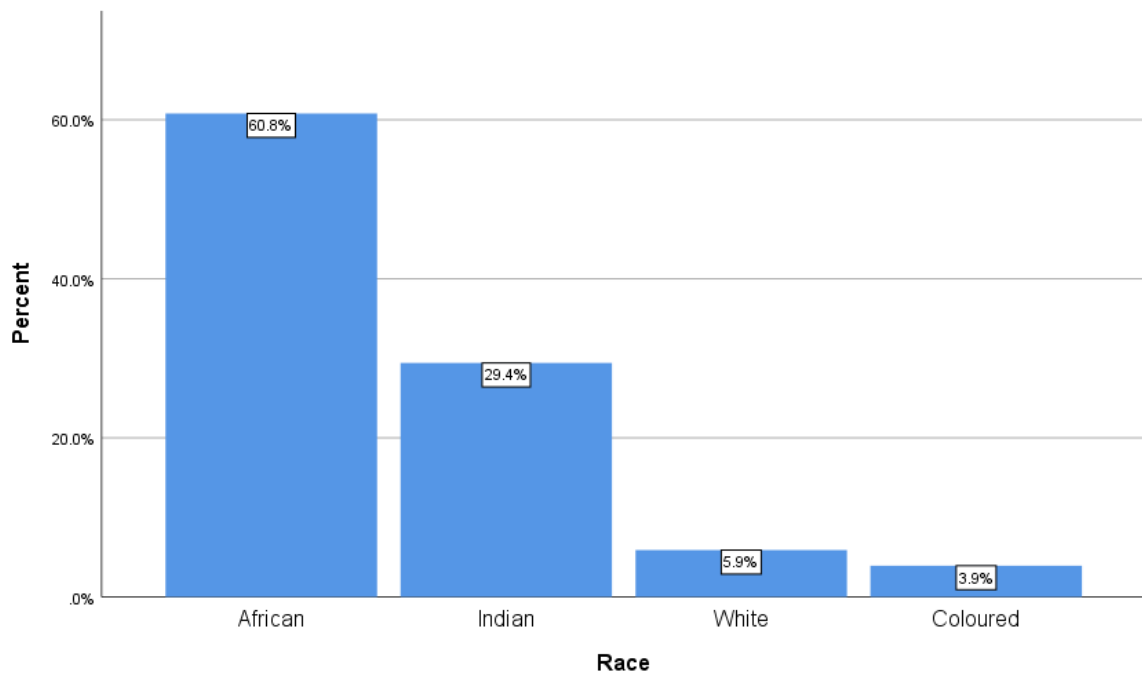


Figure 4-2: An indication responded participant distribution race.

Figure 4-3 below indicates the proportion of respondents. Of the total of 51 responded participants, 32 were Engineers which accounts to 62, 75%, while 19 were Clerk of Works which account to 37, 25%. It should be noted that the sample for Engineers was 39. The response rate of 32 out of 39 means that on the case of the Engineers the response rate was 82% which is considered very good. The sample for Clerk of Works was 41, the response of 19 means that just less than 50% of the participant responded.

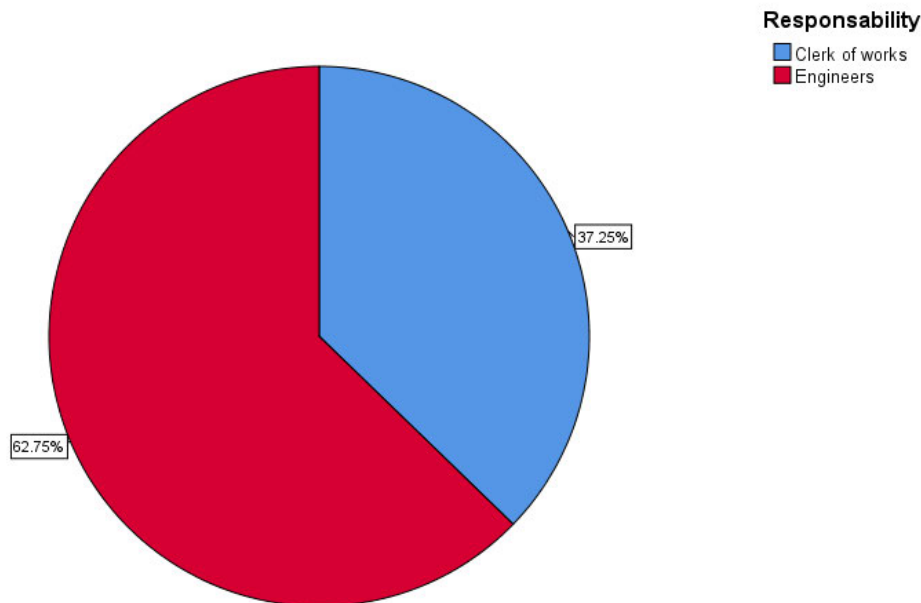


Figure 4-3 Comparisons between the responded participant’s responsibility – EThekwini Electricity employees

Figure 4-4 on the below graph shows the responded participants based on the years of experience within eThekwini Electricity. Majority of the participant have more than 10 years of experience within eThekwini Electricity which account for 39% while only less than 8 % of the participant had less than 2 years’ experience at eThekwini Electricity. This mean that the organisation is retaining enough skills.

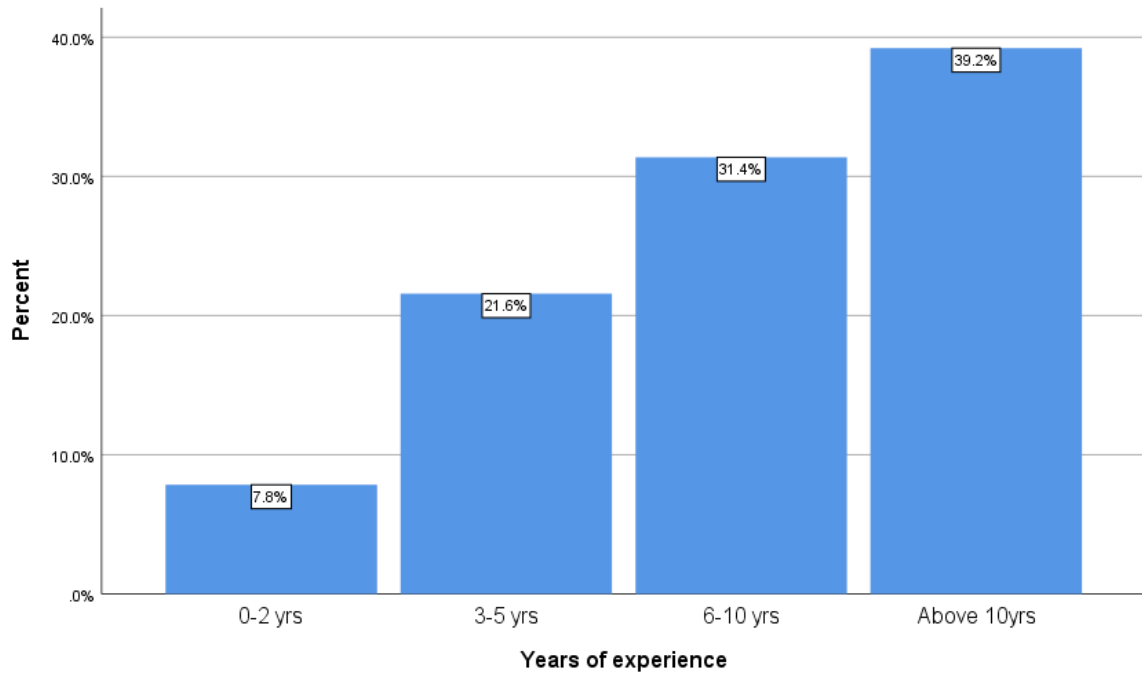


Figure 4-4: Comparison of participants’ years of service at eThekweni Electricity

Figure 4-5 below indicates the experience of participants in terms of dealing with contract. More than 90% of the participants have been involved on contracts over the value of R 200 000. Contracts with the value of less than R200 000 used different procurement processes on that there is no need for a competitive bid process to be followed while anything above R 200 000 follow a competitive bidding process. With competitive bidding process, a full contract specification need to be developed and bidders are evaluated based on responsiveness to that specification.

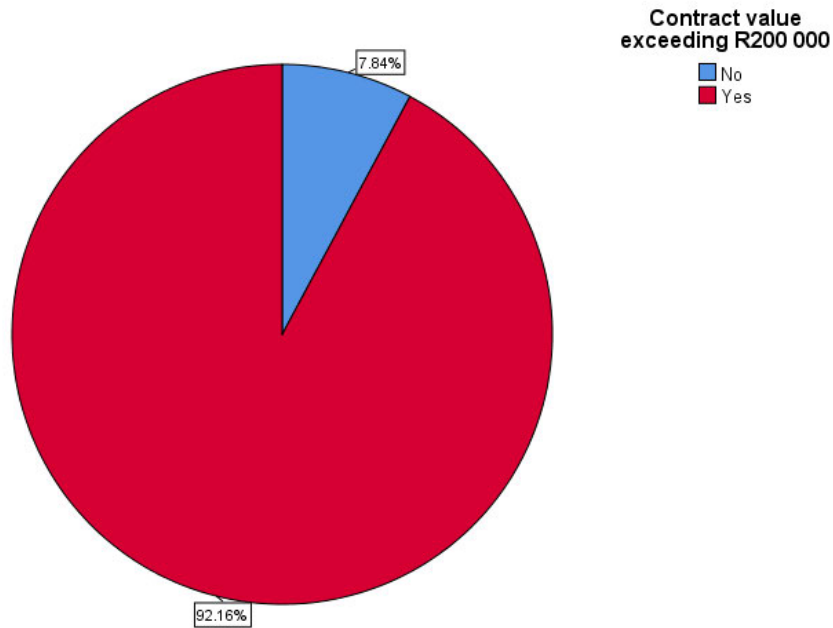


Figure 4-5: Comparisons of participants' involvement on competitive bidding procurement.

4.3.1.2 eThekweni Electricity Bidders

The analyses of background information for eThekweni Electricity bidders is about the bidder's representative basic information of gender and race. In addition, the basic information about the companies themselves on whether they are SMMEs companies or not as well as the history of being successful to be awarded eThekweni Electricity contract.

Figure 4-6 below indicates that about 77, 59% of the company representatives were male and only about 22% were female. The company representatives chosen were either the company owner or the person responsible for completing eThekweni Electricity bid document.

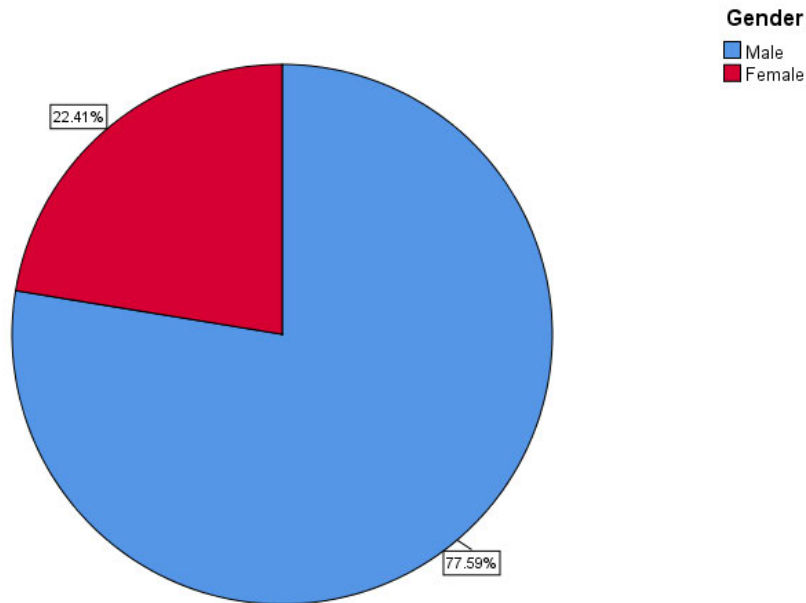


Figure 4-6: Comparisons of the bidder’s representative’s gender

Figure 4-7 below the race categories for the bidders/contractors representatives. Majority of the responded were of African race.

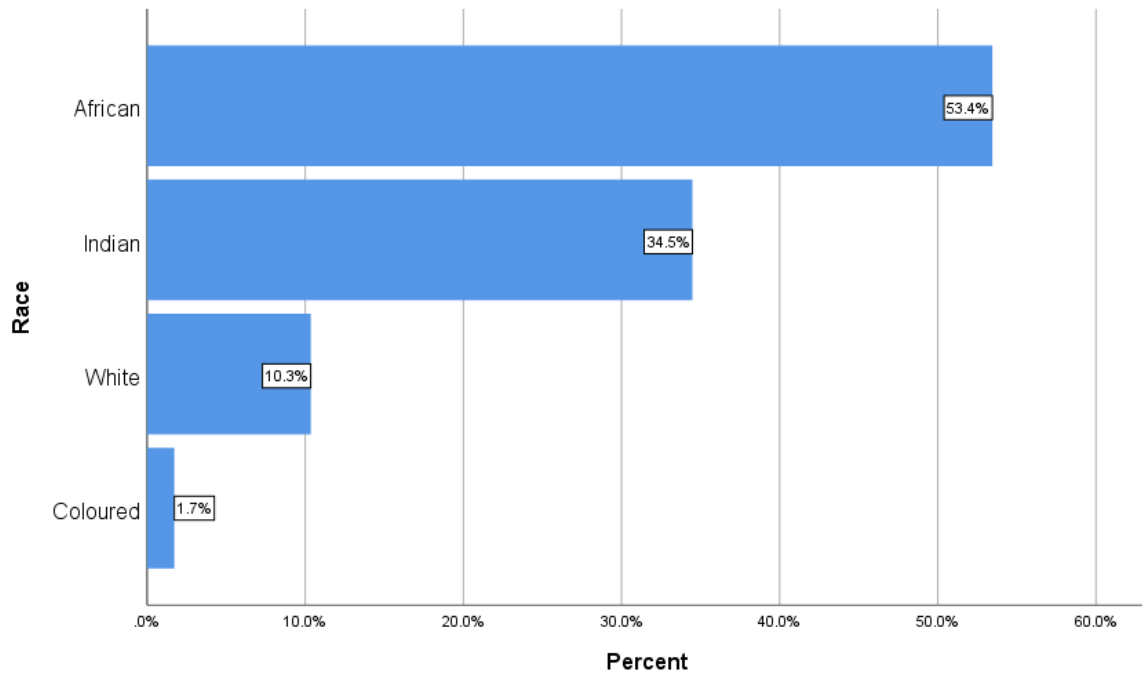


Figure 4-7: Comparisons of the bidder’s representative’s race

Figure 4-8 below depicts that off the total of represented bidders, 79% fall under SMMEs and the remaining 21 % are not SMMEs. Considering that the focus of this study was to

gather the opinions of SMMEs this representation is valuable. Further, the aim is to determine or confirm if contract specifications are a barrier for SMMEs to gain access to eThekwini Electricity procurement services and also identify the requirements within the contract specification that contributes the most on creating barriers for SMMEs access.

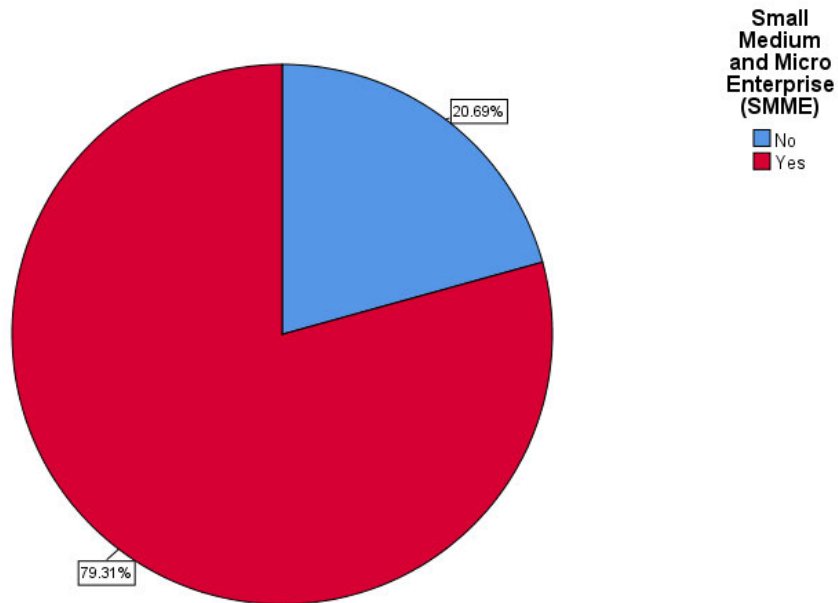


Figure 4-8: Comparisons of the respondent company size

Figure 4-9 below shows the number of times that the bidder have bided or attempted to be part of eThekwini Electricity procurement services. Only about quarter of the bidders have bided less than 3 times. The rest of the respondent have bided at least three times or more. These provided them with an opportunity to see eThekwini Electricity contract specification few times allowing them to have a better understanding of the process and requirements.

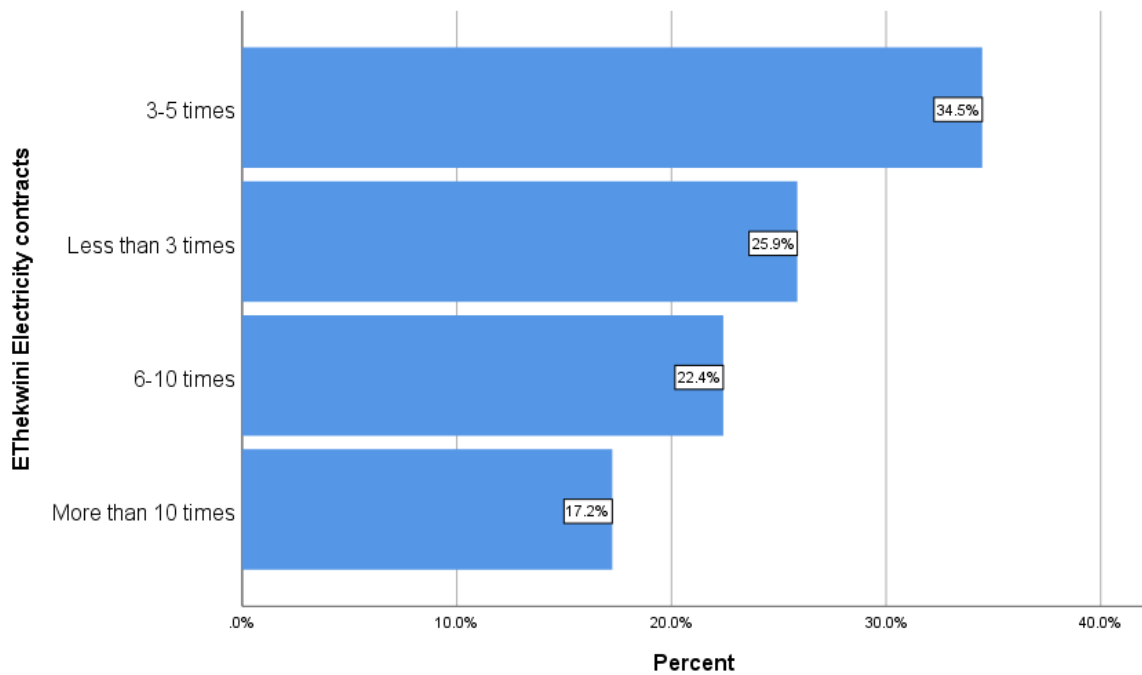


Figure 4-9 Indication of the activities of eThekweni Electricity bidders with bidding process.

Figure 4-10 below indicate the response rate of the participants. About 64% of the responded participants were bidders who have been successful to be awarded eThekweni Electricity at least once. This is contrary to the population size were, 63% were unsuccessful bidders. The response rate from the unsuccessful bidders was too low making it difficult for the results to be considered a true reflection. There are a number of reasons that this can happen including the case some companies are too small and are put together only to bid for a specific tender and once that bid is unsuccessful those companies dismantle and the owner look for other opportunities elsewhere.

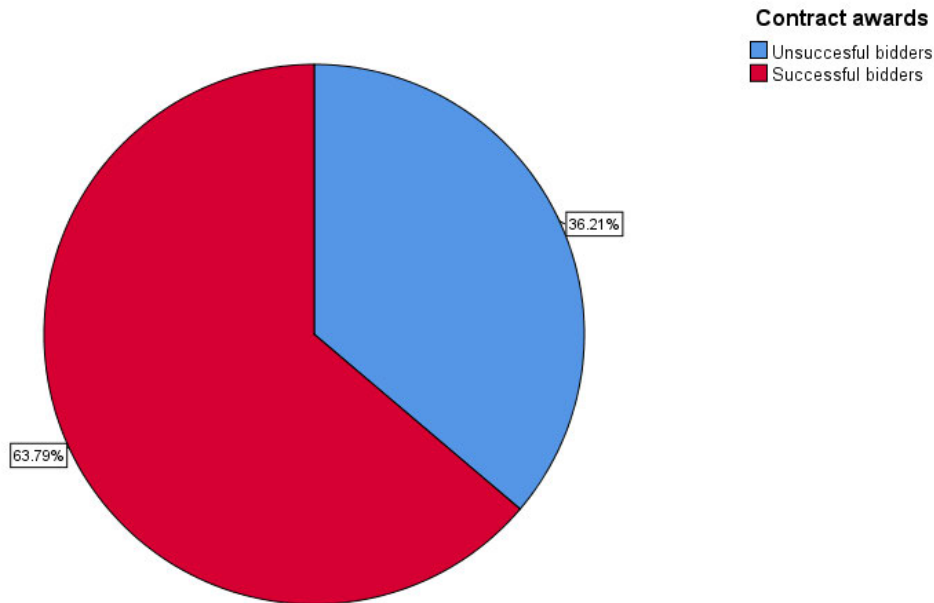


Figure 4-10: Comparisons of the respondents between successful bidders and unsuccessful bidders

4.3.2 Research Objectives One: Role of Procurement

As discovered during literature review, procurement is a critical instruments available to any state for the country’s economic development. In the case of South Africa it is one of the tools available to grow the economy and fight against the triple bottom line challenges of unemployment, poverty and inequality. SMMEs development is considered a critical partner in this field.

One of the study objectives was to determine eThekweni Electricity employees’ understanding of the role of public procurement specifically on public infrastructure procurement. This included the procurement role on providing services to the people, role of procurement on creating job opportunities, on creating opportunity for SMMEs to do business with government, on SMMEs growth and development. The reasons this needed to be tested is because if procurement is conducted with this consideration, it has an influence on how bid/tender contract specification minimum qualification requirements are set.

In order to test this objectives six (6) questions with Likert 5 scale responses from strongly disagree, disagree, neutral, agree and strongly agree were created as follows:

Table 4-2: Questionnaires questions prepared to answer research question one.

Questions	EThekweni Electricity Employees
Q1	Procurement is necessary for service delivery.
Q2	Employment opportunities should be part of procurement consideration.
Q3	Procurement provide an opportunity for SMMEs companies to do business with the government.
Q4	Procurement provide an opportunity for SMMEs companies to develop and grow.
Q5	Development and growth of small companies should be part of procurement specification consideration.
Q6	Growth of SMME has a significant impact on the growth of South Africa's economy

Table 4-2 above indicates questions created in relation to the first research question. The questions were arranged such that people who answered agree/strongly agree on a specific question were considered to have an understanding of public procurement process. A strongly disagree/disagree was considered that the participants lack an understanding of public procurement role in the economy.

4.3.2.1 Procurement and service delivery

Table 4-3 Response to Q1: Procurement for service delivery

Rating		Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	2.0	2.0
	Disagree	2	3.9	5.9
	Neutral	3	5.9	11.8
	Agree	9	17.6	29.4
	Strongly agree	36	70.6	100.0
Total		51	100	

Table 4-3 above indicates that most of the participant agreed that procurement is necessary for service delivery. This indicates that employees understand that procurement is a critical tool to deliver the required services to communities.

4.3.2.2 Procurement and creation of employment opportunities

Table 4-4 Response to Q2: Use of procurement to create job opportunities

	Rating	Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	2	3.9	3.9
	Disagree	2	3.9	7.8
	Neutral	8	15.7	23.5
	Agree	18	35.3	58.8
	Strongly agree	21	41.2	100.0
Total		51	100	

Table 4-4 above indicates that most of the participants agreed that creation of job opportunities should be considered during procurement. In total (18 + 21 = 39) respondents were in agreement. This indicated that eThekwini Electricity employees understand the use of procurement to create job opportunities as supported by R Watermeyer (2002) who discovered that if properly planned and executed, public procurement provides business and employment opportunities.

4.3.2.3 Procurement and access for SMMEs to do business with government

Table 4-5 Response to Q3: Procurement and SMMEs opportunity to do business with government

	Rating	Frequency	Percent	Cumulative Percent
Valid	Disagree	5	9.8	9.8
	Neutral	10	19.6	29.4
	Agree	22	43.1	72.5
	Strongly agree	14	27.5	100.0
Total		51	100	

As per Table 4-5 above, a total of (14 + 22) = 36 is in agreement that procurement provides an opportunity for SMMEs to do business with government. This is about 70% of the respondents as an indication that the majority of eThekwini Electricity understand the role of procurement processes in provision of SMMEs opportunity to work with government as stated by Loader (2015) who indicated that public procurement provided an opportunity for SME to do business with government, a prestigious reliable employer.

4.3.2.4 Procurement and the growth/development of SMMEs

Table 4-6 Response to Q4: Procurement as a tool for development and growth of SMMEs.

	Rating	Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	2.0	2.0
	Disagree	7	13.7	15.7
	Neutral	5	9.8	25.5
	Agree	23	45.1	70.6
	Strongly agree	15	29.4	100.0
Total		51	100	

Table 4-6 shows that eThekweni Electricity employees are in agreement that procurement is a tool for development and growth of SMMEs as stated by Pipe (2011), Sahle (2002) and R Watermeyer (2002), who indicated that public procurement assist in the long term development and growth of SMMEs.

4.3.2.5 Contract specification and the growth/development of SMMEs

Table 4-7 Response to Q5: Growth and development of SMMEs consideration during contract specification development.

	Rating	Frequency	Percent	Cumulative Percent
Valid	Strongly disagree	1	2.0	2.0
	Disagree	5	9.8	11.8
	Neutral	6	11.8	23.5
	Agree	22	43.1	66.7
	Strongly agree	17	33.3	100.0
Total		51	100	

Table 4-7 illustrates that eThekweni Electricity employees are in agreement that SMMEs growth and development should be taken into consideration when contract specifications are drafted.

4.3.2.6 SMMEs growth and the growth of South Africa.

Table 4-8 Response to Q6: Growth and development of SMMEs impact on the growth of South Africa.

Rating		Frequency	Percent	Cumulative Percent
Valid	Disagree	2	3.9	3.9
	Neutral	4	7.8	11.8
	Agree	18	35.3	47.1
	Strongly agree	27	52.9	100.0
Total		51	100	

Table 4-8 depicts that eThekweni Electricity are in agreement with the European Commission (2008) cited in (Flynn, 2018, p. 2) that SMMEs are at the centre to create employment, entrepreneurial activity and the growth of a country, the same argument made by the Minister of Small Business Development: Minister Lindiwe Zulu when she stated that SMMEs are critical to the economy because this sector contributes more than 45 percent of the GDP (SBD, 2014).

4.3.2.7 Summary of research objective one results

The results indicated that the majority of eThekweni Electricity employees have answered strongly agree and agreed on the questions. This indicate a possibility that the majority of the employees understand the public procurement roles on the economy which includes providing services to people, creating employment, providing SMMEs access and growth opportunities, and that procurement should take SMMEs into consideration. Ideally the expectation is that if eThekweni Electricity employees understand the role of procurement, specifically the Engineers that plays an active role on development of contract specification requirement, the results will be greater participation of SMME on procurement services. The next research question aim to get clarity on whether there is a greater participation of SMMEs on eThekweni Electricity infrastructure procurement services.

4.3.3 Research Objectives Two: SMMEs access barriers related to contract specification.

As discovered through literature review, one of the barriers of SMMEs access to public procurement is contract specification requirement. Loader (2015) discovered that the requirements set as a condition of tender or of contracts can deterred SMMEs from bidding, this happened even though public tenders are advertised publicly for anyone to bid. In addition, if the SMMEs submit its bid their bids are considered non-responsive. For similar reasons, local business owners such as the Delangokubona Business Forum opt to use other means of gaining access to eThekwini Electricity procurement services which resulted in the unfortunate intimidation of eThekwini Municipality staff and appointed contractors due to the claim that the specification requirements excluded the group.

Loader (2015) also indicated that problems such as poor defined specifications, contract size and period, proof of track record (experience), technical/professional competencies were the contributing factors to SMMEs lack of access to public infrastructure procurement services. This argument needed to be tested in order to establish if eThekwini Electricity contract specification/requirements are one of the reasons for SMMEs barrier to eThekwini Electricity procurement services.

To answer this research question, a set of six (6) questions with Likert 5 scale response from strongly disagree, disagree, neutral, agree and strongly agree were created as per Table 4-9 below.

Table 4-9: Questionnaires questions prepared to answer research question two

Question	EThekwini Electricity Employees	EThekwini Electricity Bidders
Q1	SMMEs understand eThekwini Electricity's bid technical specification.	I understand eThekwini Electricity's bid technical specification
Q2	SMMEs meets eThekwini Electricity's minimum requirements for company experience set on bid technical specification.	My company meets the eThekwini Electricity's minimum requirements for company experience set on bid technical specification
Q3	SMMEs meets eThekwini Electricity's minimum experience for key personnel set on bid technical specification	My company meets the eThekwini Electricity's minimum experience for key personnel set on bid technical specification.
Q4	SMMEs meets eThekwini Electricity's minimum requirements for qualification and/or competency certificate of key personnel set on bid technical specification	My company meets the eThekwini Electricity's minimum requirements for qualification and/or competency certificate of key personnel set on bid technical specification
Q5	SMMEs meets eThekwini electricity's minimum technical requirements for tools, equipment and materials sets in bid technical specification	My company meets the eThekwini electricity's minimum technical requirements for tools, equipment and materials sets in bid technical specification
Q6	The value of the contract makes it difficult for SMMEs bidders to comply with eThekwini Electricity set contract specification	The value of the contract makes it difficult for my company to comply with eThekwini Electricity set contract specification;

4.3.3.1 Technical specification ambiguity

Table 4-10: Response on Q1 of research question two – Technical specification ambiguity

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	5	1	9.8	1.7
	Disagree	13	6	25.5	10.3
	Neutral	20	9	39.2	15.5
	Agree	11	26	21.6	44.8
	Strongly agree	2	16	3.9	27.6
	Total	51	58	100.0	100.0

Table 4-10 above shows the possibility that according to eThekwini Electricity's employees (Engineers and Clerk of Works) bidders do not understand the technical specification requirements. This is shown by the $(9,8 + 25,5) = 35,3\%$ of the respondent disagree with the statement that bidders understand eThekwini Electricity technical specification as compared with the $(21,6 + 3,9) = 25,5\%$ that agree. Contrary to that, the eThekwini Electricity bidders agree that they understand the technical specification when one compare $(1,7 + 10,3) = 12\%$ that disagrees with $(44,8 + 27,6) = 72\%$ that agree.

4.3.3.2 Compliant with company experience requirements

Table 4-11: Response on Q2 of research question two – Bidders comply with company experience set requirements.

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	4	3	7.8	5.2
	Disagree	19	4	37.3	6.9
	Neutral	11	4	21.6	6.9
	Agree	13	23	25.5	39.7
	Strongly agree	4	24	7.8	41.4
	Total	51	58	100.0	100.0

Similar to the first question, Table 4-11 shows that while eThekwini Electricity bidders believe that they comply with the specification requirements with respect to the company experience, eThekwini Electricity employees are of the view that the bidders are failing to meet the requirements.

4.3.3.3 Experience of key personnel experience requirements

Table 4-12: Response on Q3 of research question two – Bidders compliant with set requirements for key personnel experience.

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	6	4	11.8	6.9
	Disagree	16	4	31.4	6.9
	Neutral	11	4	21.6	6.9
	Agree	16	24	31.4	41.4
	Strongly agree	2	22	3.9	37.9
	Total	51	58	100.0	100.0

Consistent with to the first and second questions, Table 4-12 shows that while eThekwini Electricity bidders believe that they comply with the specification requirements with respect to the experience of key personnel, eThekwini Electricity employees are of the view that the bidders are failing to meet this requirements.

4.3.3.4 Qualifications of key personnel qualifications and competence requirements

Table 4-13: Response on Q4 of research question two – Bidders compliant with set requirements for key personnel experience.

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	5	6	9.8	10.3
	Disagree	12	4	23.5	6.9
	Neutral	17	2	33.3	3.4
	Agree	13	25	25.5	43.1
	Strongly agree	4	21	7.8	36.2
	Total	51	58	100.0	100.0

Again consistent with to the first, second and third questions, Table 4-13 also shows that while eThekwini Electricity bidders believe that they comply with the set specification requirements with respect to qualifications and competencies of key personnel, eThekwini Electricity employees are of the view that the bidders are failing to meet this requirements.

4.3.3.5 Compliant with plant, tool and equipment’s requirements

Table 4-14: Response on Q5 of research question two – Bidders compliant with set requirements for plant, tools and equipment.

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	5	4	9.8	6.9
	Disagree	14	4	27.5	6.9
	Neutral	11	2	21.6	3.4
	Agree	16	25	31.4	43.1
	Strongly agree	5	23	9.8	39.7
	Total	51	58	100.0	100.0

Table 4-14 shows slight agreement by the eThekwini Electricity employees that the bidders are able to meet the set technical requirements for the plant, tools and equipment. As per the bidders, they fully believe that they are able to meet this requirements. It should be noted that this requirements should not be much of the problem because plants, tools and equipment can be hired from relevant service providers. The bidders does not necessarily need to own such equipment during the bidding process, they only need to demonstrate that they have an agreement with relevant service provider to lease the equipment on tender award.

4.3.3.6 Contract size or value

Table 4-15: Response on Q6 of research question two – Bidders failure to comply with contract specification due to the value or size of the contract.

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	2	11	3.9	19.0
	Disagree	7	16	13.7	27.6
	Neutral	11	17	21.6	29.3
	Agree	19	6	37.3	10.3
	Strongly agree	12	8	23.5	13.8
	Total	51	58	100.0	100.0

Table 4-15 indicates that eThekwini Electricity employees agree with the question that the value of the contract makes it difficult for the bidders to comply with the specification. However, the responded bidders are of the view that this is not the case.

4.3.3.7 Summary of research object two results

In order to properly calculate the mean, Question 6 which is about the value of contract was reverse captured from a scale of 5 to 1 as compared to the other questions were a scale of 1 to 5 was used. The mean is 3 and values below 3 indicate that the tested variable is a barrier while the mean above 3 indicate that the tested variable is not a problem.

The results indicated that contract specification on overall is a barrier for SMMEs access to eThekwini Electricity procurement services according to the eThekwini Electricity employees as shown with the mean of each tested possible barrier in Table 4-16 below.

Table 4-16 Comparison and ranking of SMMEs contract specification barriers as per eThekwini Electricity Employees' view.

		Specification understanding	Company Experience	Key personnel experience	Key personnel qualifications	Resources-Tools, equipment	Contract value
No.	Valid	51	51	51	51	51	51
	Missing	51	51	51	51	51	51
Mean		2.84	2.88	2.84	2.98	3.04	2.37
Std. Deviation		1.007	1.125	1.120	1.104	1.183	1.113
Variance		1.015	1.266	1.255	1.220	1.398	1.238

The table clearly indicates that the eThekwini Electricity participants feel strongly agree about the value of contract being the highest barrier amongst the six tested barriers of contract specification, followed by the human resource experience, specification understanding, company/bidder's experience then qualifications of key personnel. The requirements for tools/plant and equipment is not considered a problem.

Table 4-17: Comparison and ranking of SMMEs contract specification barriers as per eThekwini bidders' view.

		Specification understanding	Company Experience	Key personnel experience	Key personnel qualifications	Resources-Tools, equipment	Contract value
No.	Valid	58	58	58	58	58	58
	Missing	58	58	58	58	58	58
Mean		3.86	4.05	3.97	3.88	4.02	3.28
Std. Deviation		0.999	1.115	1.169	1.272	1.162	1.281

Table 4-17 shows that according to the eThekwini Electricity participants of bidders contract specification is not a barrier for SMMEs access to eThekwini Electricity procurements services. Although the response for unsuccessful bidders is too low, the results don't differ much between the two participants as shown in Figure 4-11 below.

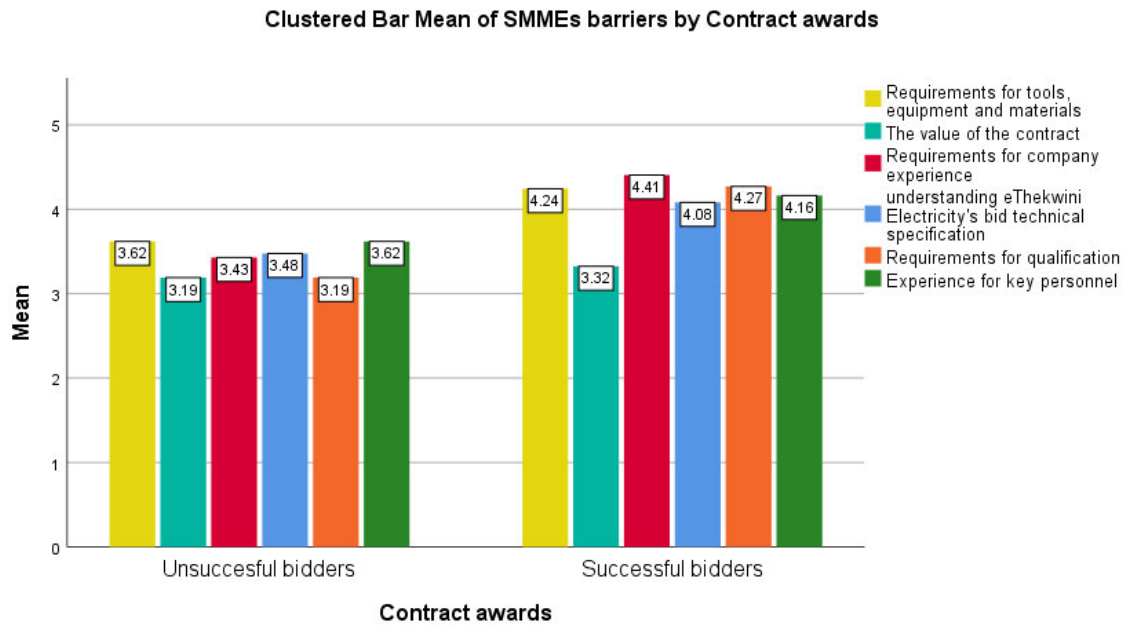


Figure 4-11: Comparison between successful bidders and unsuccessful bidders of SMMEs barriers.

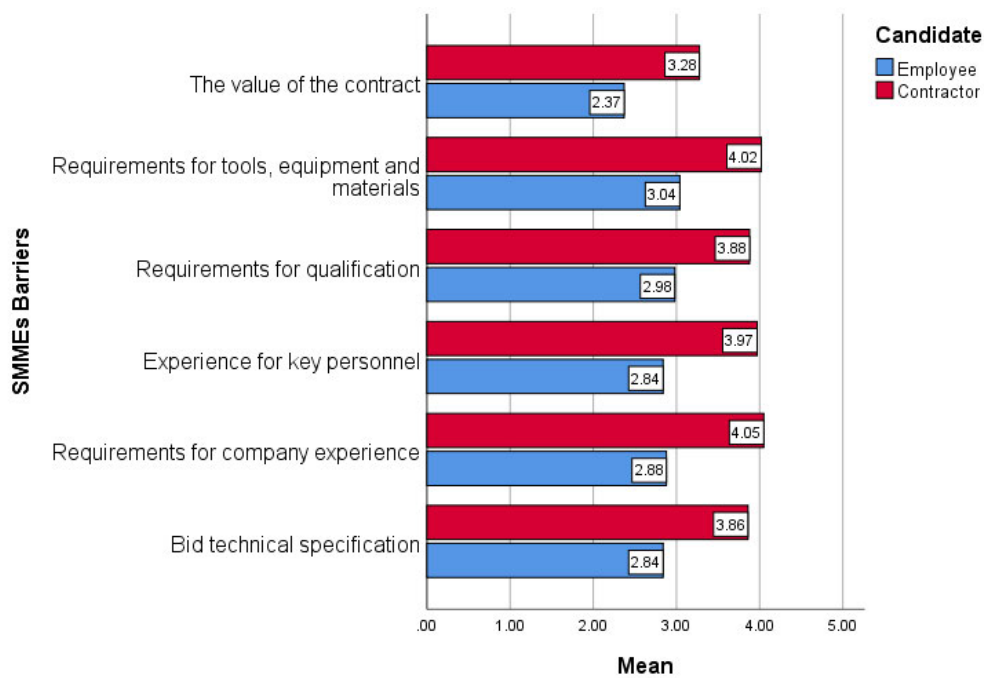


Figure 4-12: Comparison between eThekweni Electricity employees and bidders/contractors of SMMEs barriers.

Figure 4-12 shows the comparison between the employees and the bidders.

4.3.4 Research Objectives Three: Need and impact of contract specification on service delivery

Objective one was to determine the role of procurement in the economy including the contribution of SMMEs in economic growth. Development and growth of SMMEs has been found to be critical for economic growth and public infrastructure procurement has been identified as one of the tool for SMMEs development. Objective two was to determine if contract specification is a barrier to SMMEs access to public procurement in this case to eThekweni Electricity procurement services.

The question is if SMMEs development is critical in the economy and the fight against the triple bottom line of South Africa and on the other hand procurement is a tool to provide SMMEs development and growth, what positive changes that can be done on contract specification. This is because at the same time SMMEs are unable to access public procurement due to contract specification requirements. In order to address the impact of contract specification on service delivery, it is essential for stakeholders to look at various questions about contract specification, such as what will be an impact of having relaxed contract specification requirements? Objectives three or research question three aim to determine the impact of removing or relaxing the contract specification requirements.

To answer research question three, similarly to what was done on objectives one and two, a set of six (6) questions with Likert 5 scale response from strongly disagree, disagree, neutral, agree and strongly agree were created as per Table 4-18 below.

Table 4-18: Questionnaires questions prepared to answer research question three

Question	eThekweni Electricity Employees and Bidders
Q1	All bids should have minimum requirements set using technical specification.
Q2	Compliant with bid technical specification is necessary to determine the contractor's ability to provide the required service.
Q3	Companies that meet eThekweni Electricity stringent bid technical specification perform better.
Q4	Non-compliant with bid technical specification is an indication of bidder's inability to offer the required service.
Q5	Most successful bidders are subcontracting work to small companies
Q6	Subcontracted small companies are able to deliver the required services

4.3.4.1 Response on Q1 of research question three - Need or impotence of technical specification requirements

Table 4-19: Participants response to Q1 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	0	1	0	1.7
	Disagree	2	4	3.9	6.9
	Neutral	7	5	13.7	8.6
	Agree	22	25	43.1	43.1
	Strongly agree	20	23	39.2	39.7
	Total	51	58	100	100.0

Table 4-19 specified that both responded participants from eThekweni Electricity employees and bidders believed that all bid documents should have a set of requirements governing the bid. This is in line with Cheaitou et al. (2018) who stated that in addition to the lowest bid price, contractor’s selection should be based on complaint with a pre-set minimum requirements.

4.3.4.2 Response on Q2 of research question three - Technical specification compliant and contractors ability to deliver required service

Table 4-20: Participants response to Q2 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	0	2	0	3.4
	Disagree	3	5	5.9	8.6
	Neutral	5	2	9.8	3.4
	Agree	19	29	37.3	50.0
	Strongly agree	24	20	47.1	34.5
	Total	51	58	100	100.0

Table 4-20 above shows that similar to the need to have a set of requirements on contract specification, both responded participants, eThekweni Electricity employees and bidders consider that in addition to the set minimum requirements on technical specification, bidders who comply with those requirements indicate their ability to provide the required service.

4.3.4.3 Response on Q3 of research question three - Compliant with stringent requirements and performance

Table 4-21: Participants response to Q3 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	4	5	7.8	8.6
	Disagree	5	9	9.8	15.5
	Neutral	13	7	25.5	12.1
	Agree	18	18	35.3	31.0
	Strongly agree	11	19	21.6	32.8
	Total	51	58	100.0	100.0

Not just minimum requirements are set on bid, sometimes those requirements are set high or are considered stringent. Such stringent requirement are set due to a need to manage risk (Cheaitou et al., 2018). Table 4-21 above indicates that both responded participants from eThekwini Electricity employees and bidders are of the view that the stringent requirements is necessary because contractors who comply with such offer a better service.

4.3.4.4 Response on Q4 of research question three - Compliant with specification and ability to deliver

Table 4-22 Participants response to Q4 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	3	8	5.9	13.8
	Disagree	9	4	17.6	6.9
	Neutral	7	15	13.7	25.9
	Agree	19	13	37.3	22.4
	Strongly agree	13	18	25.5	31.0
	Total	51	58	100.0	100.0

Table 4-22 illustrates that according to both responded participants from eThekwini Electricity employees and bidders not only compliant with set bid specification indicates the ability of the contractors to deliver the service, the opposite is also true. Non-compliant with the set contract minimum requirements indicate that the bidders has no ability to deliver the required services. These shows the view from participants that it is necessary to have contract specification in order to ensure the success of the project at hand.

4.3.4.5 Response on Q5 of research question three – Subcontracting of work

Table 4-23 Participants response to Q5 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	3	4	5.9	6.9
	Disagree	9	10	17.6	17.2
	Neutral	16	17	31.4	29.3
	Agree	14	17	27.5	29.3
	Strongly agree	9	10	17.6	17.2
	Total	51	58	100.0	100.0

One of the tools available to provide SMMEs access to public procurement, which is also encouraged by CIDB is for SMMEs to be subcontractors. This is in addition to SMMEs forming a joint venture with experience and technical compliant companies. Table 4-23 tests if the current work is being subcontracted and results are that currently part of the existing work is being subcontracted. Subcontracting is one of the tools used to provide access to procurement services opportunities to SMMEs including development (CIDB, 2015). This is in spite of the fact that SMMEs do not prefer to be subcontractors as it minimise their influence and results in delay payment and reduce profit margins (Loader & Norton, 2015). Subcontractors are usually locally owned SMMEs, therefore indication is that SMMEs are currently taking certain part of procurement services through subcontracting.

4.3.4.6 Response on Q6 of research question three - Performance of subcontractors

Table 4-24 Participants response to Q6 of research question three

Rating		Frequency		Percent	
		Employees	Bidders	Employees	Bidders
Valid	Strongly disagree	1	6	2.0	10.3
	Disagree	6	4	11.8	6.9
	Neutral	18	15	35.3	25.9
	Agree	18	22	35.3	37.9
	Strongly agree	8	11	15.7	19.0
	Total	51	58	100.0	100.0

Table 4-24 above shows that about $(35,3 + 15,7) = 51\%$ of responded employees participants are of the view that subcontractors are able to deliver the required services as compared to the $(2 + 11,8) = 13,8\%$ view that subcontractors are failing to perform as

required. Similarly the bidders are also of the view that subcontractors are able to deliver the required services on that $(19 + 37,9) = 56,9\%$ agree as compared to $(6,9 + 10,3) = 17,2\%$ of disagree.

4.3.4.7 Summary of research objectives three

Table 4-25: Comparison and ranking of the relationship between contract specification requirements and the ability to perform as per eThekweni Electricity Employees' view.

		Specification Need	Importance of Compliant	Compliant and Performance	Non-compliant and non- performance	Sub- contracting level	Sub- contractors performance
N	Valid	51	51	51	51	51	51
	Missing	51	51	51	51	51	51
Mean		4.18	4.25	3.53	3.59	3.33	3.51
Std. Deviation		0.817	0.868	1.172	1.219	1.143	0.967
Variance		0.668	0.754	1.374	1.487	1.307	0.935

Basically according to eThekweni Electricity's employees there is a need to have a contract specification so that a contractor that is able to deliver the required services is appointed and risk of project failure is minimized. In addition, the fact that majority of successful bidders subcontract the work to local small companies, strongly suggest that there is a significant possibility that local small companies (SMMEs) are afforded an indirect opportunity to participate in procurement services. At the same time it is noted that the local small companies are able to deliver the required service. As previously subcontracting has a disadvantage, specifically on non-payment which then results in the failure of SMMEs/subcontractors. This means that there is a need to do something that can allow the subcontractors to be directly appointed without a negative effect to the service required, specifically since the result suggests that they subcontractors are able to provide the required service.

4.3.4.8 Research objective three eThekwini Electricity bidders/contractors

Table 4-26: Comparison and ranking of the relationship between contract specification requirements and the ability to perform as per eThekwini Electricity bidders/contractor’s view.

		Specification Need	Importance of Compliant	Compliant and Performance	Non-compliant and non-performance	Sub-contracting level	Sub-contractors performance
N	Valid	58	58	58	58	58	58
	Missing	58	58	58	58	58	58
Mean		4.12	4.03	3.64	3.50	3.33	3.48
Std. Deviation		0.957	1.025	1.321	1.367	1.161	1.188
Variance		0.915	1.051	1.744	1.868	1.347	1.412

The bidders are also mostly in agreement with eThekwini Electricity employees on the need to have contract specification with minimum requirements so that the appointed contractor is able to deliver the required services with minimum risk of project failure. In addition, there is also an agreement that existing work is subcontracted and the subcontractors are able to deliver the required services.

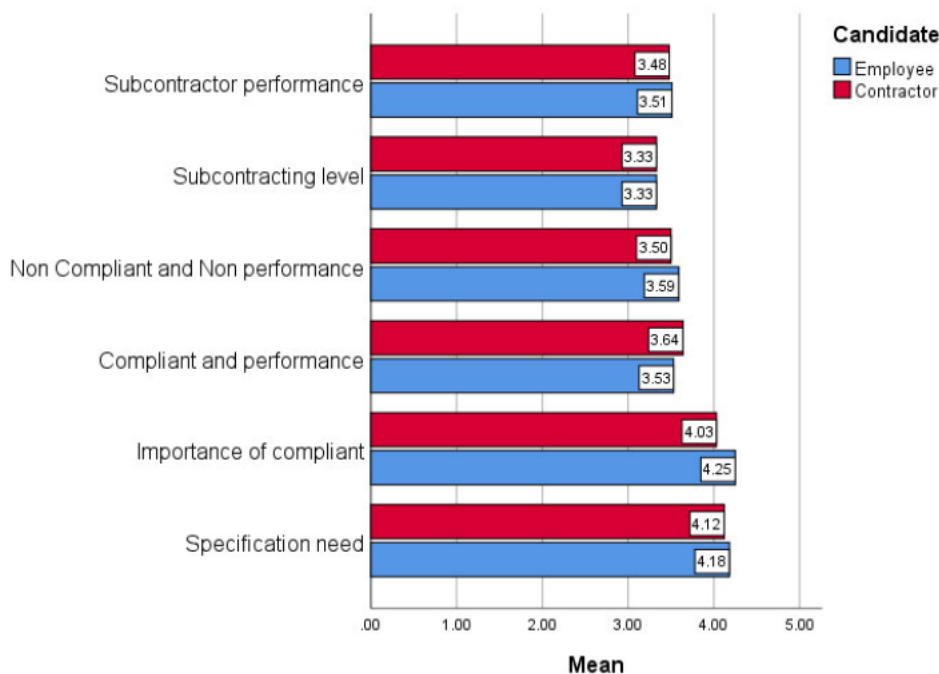


Figure 4-13 Comparison between eThekwini Electricity employees and bidders/contractors on the need and impact of contract specification on service delivery

Figure 4-13 above basically shows that bidders and employees consider that a set of minimum requirements are required on contract specifications to ensure that the contractor that is able to deliver the service is appointed. In addition, it also shows that such work is subcontracted and the appointed subcontractor is able to deliver the service. Those subcontractors are generally the same companies who failed to meet the technical specification requirements. For this reasons it means that although a certain level minimum requirements is required, it is possible that the level can be set such that SMMEs are able to comply with the specification and appointed directly while also be able to achieve service delivery with minimum impact.

4.4 Inferential Statistics

Inferential statistics try to infer information of the population by formation of conclusions about the differences between populations relating to any parameter or relationships between variables. Inferential statistical techniques are used to test the hypotheses and on that basis it is decided whether the hypotheses are accepted or rejected. This process of analysis follows the description of data to provide conclusive results is called inferential analysis. On the basis of these tests, generalization made to a certain sample group is extended to the entire population and this process of extension is known as drawing inferences on the basis of inferential analysis. Thus, an inferential analysis is aimed at testing of hypothesis (Pandya, 2010). In this study inferential statistics was used to make judgements on the probability between groups is a reliable one and compare variables. Most of the major inferential statistics come from a general family of statistical model known as the General Linear Model to test the hypothesis. This includes the t-test, Cronbach alpha, Chi-Square Tests regression analysis and many of the multivariate methods like factor analysis, multi-dimensional scaling, cluster analysis, discriminate function analysis, population parameters from observing the sample values.

4.4.1 Reliability

4.4.1.1 Role of Procurement

“Hypothesis 1”

H₀: “There is no significant role that exists in the procurement process”

H₁: “There is significant role that exists in the procurement process”

Reliability of eThekweni Electricity employees on research objectives one questionnaires was measured to be 0.831 by measuring Cronbach alpha for the participants’ attitude towards

the Role of Procurement. Using Cronbach alpha as a reliability criterion for the Role of Procurement questionnaires and this measure being greater than 0.7, the results are considered reliable. The researcher accepted the H1 hypothesis that there is a significant role that exists in the procurement process.

4.4.1.2 SMMEs barriers

“Hypothesis 2”

H₀: “There are no barriers that exists in the procurement process for SMMEs”

H₁: “There are barriers that exists in the procurement process for SMMEs”

Reliability of eThekwini Electricity employees on research objectives two questionnaires was measured to be 0.780 by measuring Cronbach alpha for the participants’ attitude towards the various SMMEs barriers. Using Cronbach alpha as a reliability criterion for the SMMEs barriers questionnaires and this measure being greater than 0.7, the results are considered reliable.

Similarly, the same measure on the eThekwini Electricity bidders’ response to the SMMEs barriers questionnaires was done, and the reliability was measured to be 0.796 which is also considered to be reliable as Cronbach alpha is greater than 0.7. The researcher rejected the null hypothesis H₀ as the percentage indicated that there are barriers that exist in the procurement processes for SMMEs.

4.4.1.3 Need and impact of contract specification (Pro-SMMEs specification) to service delivery

“Hypothesis 3”

H₀: “There is no need and impact of contract specification to service delivery”

H₁: “There is a need and impact of contract specification to service delivery”

Reliability of eThekwini Electricity employees on research objective three questionnaires were measured to be 0.754 by determining Cronbach alpha for the participants’ attitude towards the need of contract specification (pro-SMMEs) and impact on service delivery. Using Cronbach alpha as a reliability criterion for the pro-SMMEs requirements questionnaires and this measure being greater than 0.7, the results are considered reliable.

Similar measure on the eThekwini Electricity bidders’ response to the pro-SMMEs questionnaires were done and reliability was measured to be 0.833 which is also considered to be reliable as Cronbach alpha is greater than 0.7.

4.4.2 Relationship test

4.4.2.1 Role of procurement –Research objectives one

Table 4-27: Comparisons of the two eThekwini Electricity participants view on the role of procurement: Research Objectives One

			Procurement			Total
			Disagree	Neutral	Agree	
Responsibility	Clerk of works	Count	1	4	14	19
		% within Responsibility	5.3%	21.1%	73.7%	100.0%
	Engineers	Count	3	9	20	32
		% within Responsibility	9.4%	28.1%	62.5%	100.0%
Total		Count	4	13	34	51
		% within Responsibility	7.8%	25.5%	66.7%	100.0%

The results on Table 4-27 above shows that there is no relationship between Responsibility and Procurement ($P > 0.05$). See Chi-Square table below:

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	0.715 ^a	2	0.700
Likelihood Ratio	0.734	2	0.693
Linear-by-Linear Association	0.685	1	0.408
N of Valid Cases	51		

Basically the results of primary participants, Engineers and that of Clerk of Works are similar on this subjects even though their responsibility differ.

4.4.2.2 SMMEs barriers – Research objectives two

a) EThekwini Electricity Employees

“Hypothesis 4”

H0: “There are no barriers that exists in the procurement process for SMMEs”

H₁: “There are barriers that exists in the procurement process for SMMEs”

Table 4-28: Comparisons of the two eThekwini Electricity employee’s view on the SMMEs barriers: Research Objectives Two

			SMMEs Barriers			Total
			Disagree	Neutral	Agree	
Responsibility	Clerk of works	Count	6	7	6	19
		% within Responsibility	31.6%	36.8%	31.6%	100.0%
	Engineers	Count	19	11	2	32
		% within Responsibility	59.4%	34.4%	6.3%	100.0%
Total		Count	25	18	8	51
		% within Responsibility	49.0%	35.3%	15.7%	100.0%

The results on H0: “There are no barriers that exists in the procurement process for SMMEs”

H₁: “There are barriers that exists in the procurement process for SMMEs”

Table 4-28 above shows that there is a negative relationship between Responsibility and SMMEs Barriers ($P < 0.05$). See Chi-Square (table below). Hence, the increase of one variable decrease another one. Vice versa.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.775 ^a	2	0.034
Likelihood Ratio	6.742	2	0.034
Linear-by-Linear Association	6.155	1	0.013
N of Valid Cases	51		

Basically, the results show that the Engineers who are the primary participants strongly disagree that the bidders are able to comply with the set contract specification requirements. With the response to questionnaires by eThekwini electricity Engineers being 82% and fact that the Engineers are known to be responsible for contract from the initial to the final stage, the results by Engineers are considered to be a true reflection of the situation and can be generalised. For these reasons the contract specification is considered a barriers for SMMEs

access to eThekwini Electricity procurement services. In this case H0 null hypothesis was rejected.

b) EThekwini Electricity bidders

Table 4-29: Comparisons of the successful and unsuccessful eThekwini Electricity bidder’s view on the SMMEs barriers: Research Objectives Two

			SMMEs Barriers			Total
			Disagree	Neutral	Agree	
Contract awards	Unsuccessful bidders	Count	6e	7	8	21
		% within Contract awards	28.6%	33.3%	38.1%	100.0%
	Successful bidders	Count	2	16	19	37
		% within Contract awards	5.4%	43.2%	51.4%	100.0%
Total		Count	8	23	27	58
		% within Contract awards	13.8%	39.7%	46.6%	100.0%

The results on Table 4-29 above shows that there is a positive relationship between the previous/current awarded contracts bidders and those that are yet to win or being successful on awards and the SMMEs Barriers ($P < 0.05$). See Chi-Square (table below). Hence, the increase of one variable increase another one. Vice versa.

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	6.050 ^a	2	0.049
Likelihood Ratio	5.854	2	0.054
Linear-by-Linear Association	3.520	1	0.061
N of Valid Cases	58		
a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 2.90.			

Basically the results shows that the bidders who have been successful to be awarded a contract at least once, strongly believe that they are able to meet eThekwini Electricity contract specification hence they don’t see contract specification as a barrier. This is reasonable and expected for this type of bidders. On the other hand the bidders who are yet to be awarded a contract don’t feel strongly that they are able to meet eThekwini Electricity

contract specification, only about 38% as compare to the 28% and 33% being neutral. The expectation was that since this bidders are yet to be successful, they will feel strongly that contract specification is a barrier for SMMEs.

There is a possibility that in this area some bidders were not honest due to the need for social approval. They want to feel acceptable. In addition, with the response rate of unsuccessful bidders being too low, the results can't be easily generalise.

4.4.2.3 Pro-SMMEs contract specification and service delivery impact – Research objectives three

a) EThekwini Electricity employees

“Hypothesis 5”

H0: “There is no Pro-SMMEs contract specification and service delivery impact”

H1: “There is a Pro-SMMEs contract specification and service delivery impact”

Table 4-30 Comparisons of the two eThekwini Electricity employee’s view on the Pro-SMMEs specification and service delivery impact: Research Objectives Three

			Pro_SMMEs specification and service delivery impact			Total
			Disagree	Neutral	Agree	
Responsibility	Clerk of works	Count	1	9	9	19
		% within Responsibility	5.3%	47.4%	47.4%	100.0%
	Engineers	Count	4	16	12	32
		% within Responsibility	12.5%	50.0%	37.5%	100.0%
Total		Count	5	25	21	51
		% within Responsibility	9.8%	49.0%	41.2%	100.0%

The results on Table 4-30 above shows that there is no relationship between Responsibility and Pro_SMMEs ($P > 0.05$). See Chi-Square table below:

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	0.936 ^a	2	0.626
Likelihood Ratio	0.993	2	0.609

Linear-by-Linear Association	0.831	1	0.362
N of Valid Cases	51		

A Pearson's Chi-Square test analysing of the Pearson of the two eThekwini Electricity employee's view on the Pro-SMMEs specification and service delivery impact yielded a chi-square value of 0.936 therefore the researcher rejected Ho null hypothesis 5 that there is a Pro-SMMEs contract specification and service delivery impact and that there is no relationship between responsibility and Pro=SMMEs ($P > 0.05$).

b) EThekwini Electricity bidders

Table 4-31: Comparisons of the two eThekwini Electricity bidder's view on the Pro-SMMEs specification and service delivery impact: Research Objectives Three

			Pro_SMMEs specification and service delivery impact			Total
			Disagree	Neutral	Agree	
Contract awards	Unsuccessful bidders	Count	3	10	8	21
		% within Contract awards	14.3%	47.6%	38.1%	100.0%
	Successful bidders	Count	3	18	16	37
		% within Contract awards	8.1%	48.6%	43.2%	100.0%
Total		Count	6	28	24	58
		% within Contract awards	10.3%	48.3%	41.4%	100.0%

The results in Table 4-31 above shows that there is no relationship between the Contract awards and the Pro_SMMEs ($P > 0.05$). See Chi-Square table below:

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	0.583 ^a	2	0.747
Likelihood Ratio	0.565	2	0.754
Linear-by-Linear Association	0.401	1	0.526
N of Valid Cases	58		

4.5 Chapter summary

This chapter has presented the results obtained from the survey questionnaires. The survey was conducted using a website base method where data is collected and recorded online. The

response rate has been discussed including the impact of such response rate on the ability generalise the findings. Reliability of questionnaires has been found to be acceptable. All research objectives outcome was presented through both descriptive and inferential statistics.

The next chapter will discuss the conclusions and recommendations based on the study.

CHAPTER 5 Conclusion and recommendation

5.1 Introduction

SMMEs are considered to play a pivotal role on the economic growth. However, as critical as SMMEs are, the failure rate is extremely high. Entrepreneurs or SMMEs owners are unable to develop and grow their business to become successful enterprises. Due to the difficulty of small companies to do business with private companies, doing business with the state is considered a better option. Doing business with the state is normally accessible through procurement or tenders. Procurement within the public sector is therefore considered a critical tool for the development and growth of SMMEs, for Economic growth, and the fight against the triple bottom line in the case of South Africa. In order for the state to procure goods or services, a specification with minimum qualifying criteria is advertised in public so that the most responsive to specification company is given the work.

This study aim was to determine if contract specification is a barrier to SMMEs access to eThekwini Electricity procurement services. The study had three objectives which are; eThekwini Electricity understanding of the role of public procurement; the barriers of contract specification on SMMEs access to eThekwini Electricity procurement services and the impact of relax or pro-SMMEs contract specification on actual service delivery. The research used eThekwini Electricity employees as well as bidders as participants.

This chapter is to provide a conclusion on the results obtained including recommendation.

5.2 Objectives One: EThekwini Electricity understanding on the role of procurement

5.2.1 Conclusion on research objective one

The study discovered that eThekwini Electricity employees, both Clerk of Works and Engineers show an understanding of the critical role that public procurement play on the economy. This include the role played on economic development, the fight against South Africa's triple bottom line challenges of poverty, unemployment and inequality. The employees show an understanding on the need to consider SMMEs development, economic growth, the triple bottom on the development and actual implementation of tenders.

The results do not show much deferent between the two employees' participants of Clerk of Works and Engineers. The results are considered reliable and can be generalised or extended to other similar environment.

5.2.2 Recommendation on research objective one

The question is that, if eThekwini Electricity employees' responsible for procurement of services understand the role of public procurement why there is still many bidders who can be considered as SMMEs that are unsuccessful to be awarded eThekwini Electricity tenders/ contract. Is it an issue of failure of policies, failure to implement policies or it has to do with a greater focus on delivering a successful project rather than the achievement of indirect objectives such as SMMEs growth and development, job creation, poverty and inequality reduction?

There is therefore a doubt that eThekwini Electricity really understand the need to use public procurement for economic development. For these reasons there is a need to educate employees on the need to balance achievement of both SMMEs growth and development and delivering a quality projects within budget and time. In addition, it is not enough to just provide such education, however, a Key Performance Indicator should be introduced on each projects that is going to measure both quality of the delivered projects within budget and the achievement of the social responsibility on the fight against triple bottom line. A project should not only be considered successful if it was delivered within the required timeframe and budget but it should also be measured on the achievement of other key performance indicators which is SMMEs growth and development. This practice will ensure that the responsible public officials consider the overall objectives of procurement from the project inception stage to the last.

5.3 Objective Two: Contract specification barriers on SMMEs access to eThekwini Electricity procurement services

5.3.1 Conclusion on research objective two

In order to determine contract specification barriers, literature review on the list of minimum qualification criteria of contractor selection used on contract specification was utilised. This included the bidders experience, experience of key personnel, qualification and competencies of key personnel and the bidder's plant, tools and equipment. In addition, it was critical to verify the general understanding of the specification as some minimum criteria

are not met as a result of the ambiguity of the requirements. More over because the set minimum qualification criteria are mainly affected by value or size of the contract, there was a need to also test the contract value if it was a barrier for SMMEs access to procurement. These objectives was tested on eThekwini Electricity employees which are Clerk of Work and Engineers and the bidders which included both successful bidders and unsuccessful bidders.

According to the study results, it is evident from the eThekwini Electricity employees that the tested contract specification minimum qualification criteria are a barrier to SMMEs access to eThekwini Electricity procurement services. It is also noted that the highest barrier is contract value/size, followed by the human resource experience, specification understanding, company/bidder's experience then qualifications of key personnel. The requirements for tools/plant and equipment is not considered a problem. It is also found that even though in overall the barriers may seem not to be much of a barrier, the responses from the primary participants that of Engineers is strong on the fact that contract specification is a barrier. With the response rate being high for the Engineers, the results can be generalised to other similar environment

Contrary to the view from eThekwini Electricity employees, the bidder's results shows that contract specification is not much of a problem, the bidders are able to meet such requirements. This may not necessary be accurate due to the actual response rate from the sample. Such results cannot be generalised. In addition, there is also a possibility that due to the fact that feedback is not provided to the bidders once a contract is awarded on the reasons for non-award, the bidders may think that they comply with the specification the reasons for non-award was due to other issues such as price. Bidders may also be suffering from social desirability bias hence were dishonest when answering some questions. Other possibility of the low response rate may be due to access to emails by the bidders.

5.3.2 Recommendation on research objectives two

It has now been determined that the set minimum qualification criteria (contract specification) that are generally intended to ensure that the service required is delivered successful, within budget and at acceptable level of quality, also becomes a barrier for SMMEs access to such services. Access to procurement services has been determined to be critical for SMMEs growth and development. It is therefore recommended that a criteria of setting contract minimum qualification requirements be developed which will provide both

SMMEs access with minimum impact on the quality of service and cost. These criteria should be developed by the Engineers that are responsible for the contract specification. Organisations management should then provide oversight through setting of KPI that will ensure that Engineers performance is measured on both achieving growth and development of SMMEs as well as delivering a successful project. There should be a clear understanding that unlike private organisations where the focus has been on the bottom till recently, public infrastructure procurement has other significant mandates in addition to delivering a successful project. This should be driven by the Engineers who are experienced on the field rather than policy makers.

In addition, it is recommended that there should be a feedback session with unsuccessful bidders so that bidders can be furnished with reasons for no award so that they know where, and how to improve.

5.4 Objective Three: Need and use of pro-SMMEs contract specification and impact on service delivery

5.4.1 Conclusion on research objective three

This objective tested if there is a need to have contract specification and the impact if such specification are not stringent but are favourable to SMMEs. In addition, a determination was also made on whether subcontractors are used by successful bidders and on whether such subcontractors are able to provide the necessary services.

The results indicate that both eThekweni Electricity employees are of the view that there is a need to have contract specification and the stringent specification to ensure that a contractor that is able to deliver the required service is appointment. In addition, another determination made was that the participants noted that most of the successful bidders are subcontracting part of their work to subcontractors which are generally SMMEs and the subcontractors are also able to deliver the required services. Generally, subcontractors perform part of the contract work. It is also previously noted that contract value and size is the biggest barrier. The results therefore indicate that if SMMEs are undertaking a smaller portion of the work, they are able to meet the specification and are also able to deliver the required services.

5.4.2 Recommendation on research objective three

There is a greater need to unbundled contract as recommended by many including the CIDB to ensure that both minimum qualification criteria are met by SMMEs hence gaining access to procurement services not only through subcontract but by direct appointment from government. Smaller portion not only allow SMMEs to comply with technical specification but also shows their ability to deliver the required services. It is recommended that a contract must be broken into smaller section. The impact of unbundled contract is the additional work load on public officials in terms of contract management. Government Senior Management should therefore provide resources and support to the field personnel such as Clerk of Works and Engineers so that they are able to appoint more contractors on a given project hence provide an opportunity for SMMEs to have access to procurement services.

5.5 Limitation of the study

The study was limited in that the response rate was poor in the case of eThekweni Electricity bidders making it difficult to generalise the results. The data collection time frame had a negative impact in this area. The study has determined both the need for setting minimum qualification criteria for successful contractor evaluation in order to ensure service delivery and also the fact that such requirements are a barrier for SMMEs. The study has not determined the actual relationship between contract specification requirement and the successful delivery of the projects. Therefore, there is a need to establish the impact of relaxation of contract requirement to allow SMMEs access and an impact on the success of the projects so that an optimum trade-off is ascertained in a way that will allow both SMMEs to grow and development as well as successful delivery of projects.

5.6 Recommendation for further study

It is recommended that another study be conducted to determine the balance between pro-SMMEs requirements and the impact on delivering of the desired infrastructure projects at an acceptable quality and cost effective. In addition, the study should also be conducted on other utilities such as City Power and Eskom so that the result reliability can increase. A similar validation study should ensure greater participating by bidders.

5.7 Chapter Summary

This chapter has indicated the role of procurement on service delivery. Contract specification was identified and confirmed to be a barrier on SMMEs access to eThekweni Electricity procurement services and eThekweni Electricity should work on minimising such barriers while ensuring service delivery.

The study findings are that Contract Specification is a barrier for SMMEs access to eThekweni Electricity procurement services. This has been shown by the failure of SMMEs to meet the currently set minimum qualification criteria which results on their bids to be considered unsuccessful. It has also been discovered though that this failure to meet the minimum set qualification criteria does not necessary mean that the SMMEs are unable to deliver the required service, this is because it has also been found that the same SMMEs who are considered not to meet the required requirements are able to perform the same work under subcontracting. For these reasons it is possible that public officials such as Engineers can create unbundle contracts with minimum quality qualification criteria that ensure that the successful bidder is able to deliver the required services and at the same time such requirements are achievable by SMMEs.

For these reasons Engineers who are responsible for the overall delivery of procurement services have a responsibility for both the development and growth of SMMEs in addition to the delivery of successful infrastructure projects. Therefore, South Africa's public officials Engineer's performance should be measured on the delivery of both successful projects and the social responsibility of SMMEs development, job creation, skills development hence the fight against the country triple bottom line of poverty, unemployment and inequality.

A new criteria for contractor selection and requirement need to be developed in conjunction with contract unbundle so that the small companies have access to eThekweni Electricity infrastructure procurement service and are also awarded work of a suitable value and size so that the service can be provided within budget and at acceptable quality.

REFERENCES

- Akenroye, T. O., & Aju, O. (2013). A TAXONOMY OF APPROACHES FOR PROMOTING SMEs ACCESS TO PUBLIC PROCUREMENT MARKET. *Journal of Enterprising Culture*, 21(3), 335-357. doi:10.1142/S0218495813500143
- Blount, I. Y., & Hill, J. A. (2015). Supplier diversification by executive order: Examining the effect reporting compliance, education and training, outreach, and proximity to leadership have on government procurement behavior with minority business enterprises. *Journal of Purchasing and Supply Management*, 21(4), 251-258.
- Bolton, P. (2014). DISQUALIFICATION FOR NON-COMPLIANCE WITH PUBLIC TENDER CONDITIONS. *Potchefstroom Electronic Law Journal*, 17(6), 2314-2354. doi:10.4314/pej.v17i6.03
- Bolton, P. (2016). Public procurement as a tool to drive innovation in South Africa. *Potchefstroom Electronic Law Journal/Potchefstroomse Elektroniese Regsblad*, 19(1).
- Boone, H. N., & Boone, D. A. (2012). Analyzing likert data. *Journal of extension*, 50(2), 1-5.
- Cheaitou, A., Larbi, R., & Al Housani, B. (2018). Decision making framework for tender evaluation and contractor selection in public organizations with risk considerations. *SEPS Socio-Economic Planning Sciences*.
- CIDB. (2015). *Standard for uniformity in construction procurement* Government Gazette 38960 of 10 July 2015.
- Clover, T. A., & Darroch, M. A. G. (2005). Owners' perceptions of factors that constrain the survival and growth of small, medium and micro agribusinesses in KwaZulu-Natal, South Africa. *agrekon Agrekon*, 44(2), p.238-263.
- Commission, N. N. P. (2012). National Development Plan 2030: Our Future—Make It Work: Pretoria, South Africa: NPC. <http://www.npconline.co.za/pebble.asp>. [Access 31 october 2018]
- Commission, N. P. (2012). National Development Plan 2030: Our future—make it work. *Pretoria: Presidency of South Africa*.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.
- Cunningham, T. (2015). Tender Documentation for Construction Projects-An Overview.
- DSBD. (2014?). Department of Small Businesses Development Vision. Retrieved from <http://www.dsbd.gov.za/> [Access 10 November 2018]
- DTI. (1995). *White paper on national strategy for the development and promotion of small business in South Africa*. Cape Town: Department of Trade and Industry.
- DTI, Presidency, & Parliament. (1996). *National Small Business Act of 1996 (Act No. 102 of 1996)*. Cape Town: Presidency, SA.
- eThekwini. (2003). eThekwini Municipality Targeted Procurement Policy. Durban: eThekwini Municipality.
- eThekwini. (2018). *Radical Economic Transformation Framework*. eThekwini Municipality. Durban. Retrieved from http://www.durban.gov.za/Resource_Centre/retf/Pages/default.aspx [Access 31 October 2018]
- Flynn, A. (2018). Investigating the implementation of SME-friendly policy in public procurement. *Policy Studies*, 1-22.
- Flynn, A., & Davis, P. (2017). Investigating the effect of tendering capabilities on SME activity and performance in public contract competitions. *International Small Business Journal*, 35(4), 449-469.
- Georghiou, L., Edler, J., Uyarra, E., & Yeow, J. (2014). Policy instruments for public procurement of innovation: Choice, design and assessment. *Technological Forecasting and Social Change*, 86, 1-12.
- Govender, J., & Watermeyer, R. (2000). *Potential procurement strategies for construction industry development in the SADC region*. Paper presented at the Proceedings of the Second International Conference on Construction Industry Development. Gaborone, Botswana.

- Grant, C., & Osanloo, A. (2014). Understanding, selecting, and integrating a theoretical framework in dissertation research: Creating the blueprint for your "house". *Administrative Issues Journal*, 4(2), 4.
- Hisham, N., & Yahya, K. (2016). Causes and Effects of Delays in Construction Industry: Universiti Teknologi Malaysia, Faculty of Civil Engineering. Available from <http://civil.utm.my/wp-content/uploads/2016/12/Causes-and-Effects-of-Delays-in-Construction-Industry.pdf>. [Access 4 November 2018]
- Loader, K. (2013). Is public procurement a successful small business support policy? A review of the evidence. *Environment and Planning C: Government and Policy*, 31(1), 39-55.
- Loader, K. (2015). SME suppliers and the challenge of public procurement: Evidence revealed by a UK government online feedback facility. *PURSUP Journal of Purchasing and Supply Management*, 21(2), 103-112.
- Loader, K., & Norton, S. (2015). SME access to public procurement: An analysis of the experiences of SMEs supplying the publicly funded UK heritage sector. *Journal of Purchasing & Supply Management*, 21(4), 241-250. doi:10.1016/j.pursup.2015.02.001
- Marzouk, M. M., & El-Rasas, T. I. (2014). Analyzing delay causes in Egyptian construction projects. *Journal of advanced research*, 5(1), 49-55.
- Ministry. (1997). *NOTICE 691 OF 1997 Green Paper on Public Sector Procurement Reform in South Africa: an initiative of the Ministry of Finance and the Ministry of Public Works: April 1997*. Pretoria.
- Nguyen, T. P., & Chileshe, N. (2015). Revisiting the construction project failure factors in Vietnam. *Built Environment Project and Asset Management*, 5(4), 398-416.
- OECD. (2018). *SMEs in Public Procurement*.
- Ogunsemi, D. R., & Aje, I. O. (2006). A model for contractors' selection in Nigeria. *jfmmpc Journal of Financial Management of Property and Construction*, 11(1), 33-44.
- Perry, C. (2011). Supporting SME access to public procurement opportunities. *Research and Information Service Research Paper*, 12(1), 12-22.
- Pipe, J. (2011). SMME Contractor Development. *Civil Engineering (10212000)*, 19(9), 9-9.
- Quinot, G. (2014). The role of quality in the adjudication of public tenders. *Potchefstroom Electronic Law Journal*, 17(3), 1109-1136.
- Ramli, M., Malek, M., Hanipah, M., Lin, C., Sukri, M. M., Zawawi, M., . . . Fuad, N. M. (2018). *Study of factors influencing construction delays at rural area in Malaysia*. Paper presented at the Journal of Physics: Conference Series.
- RDP. (1994). *The White Paper on Reconstruction and Development*. Cape Town: Parloament.
- Rogerson, C. M. (2004). Pro-Poor Local Economic Development in South Africa: The Application of Public Procurement. *Urban Forum*, 15(2), 180-210.
- Rogerson, C. M. (2005). SMME Development in Peripheral Regions: Manufacturing in Free State Province, South Africa. *Urban Forum*, 16(1), 35-54.
- Sahle, D. (2002). Procurement-A tool to address key development and social issues. *Asist Bulletin*, 14(1).
- SAICA. (2015). 2015 SME Insights Report. Retrieved from http://www.saica.co.za/portals/0/documents/saica_sme.pdf [Access 2 October 2018]
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2016). *Research methods for business students*.
- SBD. (2014). *SMMES hold key to economic growth*. Sandton: Ministry of Small Business Development Retrieved from <http://www.dsbd.gov.za/assets/speech---colloquium-21-10-2014.pdf>. [Access 15 October 2018]
- Seda. (2016). The small, medium and micro enterprise sector of South Africa: Bureau of Economic Research Cape Town.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*: John Wiley & Sons.
- South, A., & Juta, L. (2011). *The Constitution of the Republic of South Africa, 1996*. Claremont, Cape Town: Juta Law.

- Treasury. (2000). *The preferential procurement policy framework Act no. 5 of 2000* Cape Town: Treasury.
- Tummers, L., Bekkers, V., & Steijn, B. (2009). Policy alienation of public professionals: Application in a New Public Management context. *Public Management Review: an international journal of research and theory*, 11(5), 1-20.
- Ullah, K., Abdullah, A., Nagapan, S., Suhoo, S., & Khan, M. (2017). *Theoretical framework of the causes of construction time and cost overruns*. Paper presented at the IOP Conference Series: Materials Science and Engineering.
- Van Der Merwe, M. D. (2017). *The base of the pyramid: a growth framework for SMME action*. Stellenbosch University.
- Van, L. T., Sang, N. M., & Viet, N. T. (2015). A conceptual model of delay factors affecting government construction projects. *ARNP Journal of Science and Technology*, 5(2), 92-100.
- Vijay, M. (2017). Factors Considered for Contractor Evaluation and Selection in Construction Projects. *International Journal of Engineering and Management Research (IJEMR)*, 7(3), 160-163.
- Watermeyer, R. (2000). The use of targeted procurement as an instrument of poverty alleviation and job creation in infrastructure projects. *Public Procurement Law Review*, 226-250.
- Watermeyer, R. (2002). The use of procurement to attain labour-based and poverty alleviation objectives. *Labour-Based Technology: A Review of Current Practice*, 2, 209-234.
- Werner, A., & Bagraim, J. (2016). *Organisational behaviour : a contemporary South African perspective*.
- Wilbanks, D. W. (2018). CONTRACTOR SAFETY PREQUALIFICATION: The Reality of Demanded Written Programs. *Professional Safety*, 63(7), 36.

Appendix 1 Questionnaire

Survey Questionnaires – eThekweni Electricity Employees

Section A: Demographic background information

1.1	Gender:	Male		Female					
1.2	Race:	African		Indian		Coloured		White	
1.3	Responsibility	Supervisor role (T11-T13)		Management (T14-T16)		Senior Management (T17-)			
1.4	Have you ever been involved on contracts with contract value exceeding R 200 000,00?							Yes	No
1.5	How many years have you been employed by eThekweni Electricity?								
	0-2 yrs.		3-5yrs		6-10yrs		>10 yrs.		

SMME - Small Medium and Micro Enterprises

For the purpose of this study SMME shall mean company with less than 50 employees and annual turn over of less than R10 000 000

Section B: Procurement

For this section choose the most appropriate answer from the scale		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
2.1	Procurement is necessary for service delivery;					
2.2	Employment opportunities should be part of procurement consideration;					
2.3	Procurement provide an opportunity for SMMEs companies to do business with the government					
2.4	Procurement provide an opportunity for SMMEs companies to develop and grow.					
2.5	Development and growth of small companies should be part of procurement specification consideration					
2.6	Growth of SMME has a significant impact on the growth of South Africa's economy?					

Section C: Small Medium and Micro Enterprises (SMME) Barriers

For this section choose the most appropriate answer from the scale		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.1	SMMEs understand eThekweni Electricity's bid technical specification					
3.2	SMMEs meets eThekweni Electricity's minimum requirements for company experience set on bid technical specification					
3.3	SMMEs meets eThekweni Electricity's minimum experience for key personnel set on bid technical specification.					
3.4	SMMEs meets eThekweni Electricity's minimum requirements for qualification and/or competency certificate of key personnel set on bid technical specification					
3.5	SMMEs meets eThekweni electricity's minimum technical requirements for tools, equipment and materials sets in bid technical specification					
3.6	The value of the contract makes it difficult for SMMEs bidders to comply with eThekweni Electricity set contract specification;					

Section D: Pro-SMMEs Bid/Tender Technical Specification

For this section choose the most appropriate answer from the scale		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
4.1	All bids should have minimum requirements set using technical specification					
4.2	Compliant with bid technical specification is necessary to determine the contractor's ability to provide the required service					
4.3	Companies that meet eThekweni Electricity stringent bid technical specification perform better					
4.4	Non compliant with bid technical specification is an indication of bidder's inability to offer the required service					
4.5	Most successful bidders are subcontracting work to small companies					
4.6	Subcontracted small companies are able to deliver the required services					

Survey Questionnaires – eThekweni Electricity Bidders

Section A: Demographic background information

For the purpose of this study SMME shall mean company with less than 50 employees and annual turnover of less than R10 000 000

1.1	I consider my company to be part of the Small Medium and Micro Enterprise (SMME)		Yes:		No:	
1.2	Over the past 3 years, the number of times that my company has bid for eThekweni Electricity contracts are:					
	Less than 3 times	3-5 times	6-10 times	6-10 times	More than 10 times	
1.3	Over the past 3 years, the number of times that my company has been awarded eThekweni Electricity contract/s are:					
	Non	1-3 times	4-6 times	7-10 times	More than 10 times	
1.4	*For companies who have been previously awarded eThekweni Electricity contract over the past 3 years: I have been previously (including existing contract if any) awarded eThekweni Electricity contract to the value of:					
	≤ R 200 000	R 200 001- R1 000 000	R 1 000 001- R5 000 000	R5 000 001- R10 000 000	≥ R 10 000 000	

Section B: Small Medium and Micro Enterprises (SMME) Barriers

For this section choose the most appropriate answer from the scale		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
2.1	I understand eThekweni Electricity's bid technical specification					
2.2	My company meets the eThekweni Electricity's minimum requirements for company experience set on bid technical specification					
2.3	My company meets the eThekweni Electricity's minimum experience for key personnel set on bid technical specification.					
2.4	My company meets the eThekweni Electricity's minimum requirements for qualification and/or competency certificate of key personnel set on bid technical specification					
2.5	My company meets the eThekweni electricity's minimum technical requirements for tools, equipment and materials sets in bid technical specification					

2.6	The value of the contract makes it difficult for my company to comply with eThekweni Electricity set contract specification:					
-----	--	--	--	--	--	--

Section D: Pro-SMMEs Bid/Tender Technical Specification

For this section choose the most appropriate answer from the scale		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
3.1	All bids should have minimum requirements set using technical specification					
3.2	Compliant with bid technical specification is necessary to determine the contractor's ability to provide the required service					
3.3	Companies that meet eThekweni Electricity stringent bid technical specification perform better					
3.4	Non compliant with bid technical specification is an indication of bidder's inability to offer the required service					
3.5	Most successful bidders are subcontracting work to small companies					
3.6	Subcontracted small companies are able to deliver the required services					

Appendix 2 Ethical clearance



29 August 2018

Mr Duma Sidney Mhaule (202522936)
Graduate School of Business & Leadership
Westville Campus

Dear Mr Mhaule,

Protocol reference number: HSS/1183/018M

Project Title: Contract Specification as a barrier for SMME access to eThekwin Electricity Procurement Services

Approval Notification – Expedited Application

In response to your application received 02 August 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the 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.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully



Dr Shamila Naïdoo (Deputy Chair)

/ms

Cc Supervisor: Dr Joy Ndlovu
Cc Academic Leader Research: Professor Muhammad Hoque
Cc School Administrator: Ms Zarina Bullyraj

Humanities & Social Sciences Research Ethics Committee

Professor Shenuka Singh (Chair)






Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email: ximbap@ukzn.ac.za / snvmanm@ukzn.ac.za / mohunpi@ukzn.ac.za

Website: www.ukzn.ac.za

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Appendix 3 Authority to conduct Research



TRADING SERVICES Electricity Unit

1 Jelf Taylor Crescent
Durban, 4001
PO Box 147, Durban, 4000
Tel: 031 311 1111 Fax: 031 311 9010
www.durban.gov.za

Our ref: 4/8/2/MM/lb – Doc. No. 9819
Enquiries: Mr M Mthembu Telephone: 031 311 9005
Email: MthembuMax@elec.durban.gov.za

To Whom It May Concern

**RE: PERMISSION TO CONDUCT ACADEMIC STUDY AT ETHEKWINI MUNICIPALITY-
ELECTRICITY UNIT.**

I hereby the undersigned give permission to **Duma Sidney Mhaule (Student No.202522936)** to conduct research within the organisation for his MBA dissertation entitled “**Contract Specification as a barrier for SMME access to eThekweni Electricity Procurement Services**”.


Should you need further help, please do not hesitate to contact me on the above details.

Yours sincerely



M MTHEMBU
HEAD: ELECTRICITY

Appendix 4 Turnitin Report

 <p>Originality Report</p>	<p>Processed on: 08-Dec-2018 8:51 AM CAT ID: 1053213500 Word Count: 21882 Submitted: 1</p>	<p>DS Mhaule UKZN MBA Dissertation By Duma Mhaule</p>	<table border="1"> <thead> <tr> <th colspan="2">Similarity by Source</th> </tr> </thead> <tbody> <tr> <td>Similarity Index</td> <td>4%</td> </tr> <tr> <td>Internet Sources:</td> <td>3%</td> </tr> <tr> <td>Publications:</td> <td>2%</td> </tr> <tr> <td>Student Papers:</td> <td>2%</td> </tr> </tbody> </table>	Similarity by Source		Similarity Index	4%	Internet Sources:	3%	Publications:	2%	Student Papers:	2%
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ABSTRACT Public procurement has been identified as a tool to fight against South Africa's triple bottom line challenges of unemployment, inequality and poverty. Similarly Small, Medium and Micro Enterprises (SMMEs) growth and development is seen as a solution to the same triple bottom line challenges. However the failure rate of SMMEs is very high, estimated to be 71% (Burger, 2016). For this reason public procurement should be use as a development tool for SMMEs. During South Africa apartheid period, public procurement was mostly used to protect the interest of white-owned enterprises (Rogerson, 2004). Argument is raised that even in the democratic South Africa it is still seen so specifically in the Electricity sector where most part of the work is considered specialised. Tender or contract specification is one of the greatest tool used during public procurement. For these reasons these tool can be used to either provide SMMEs access to procurement and delivery services or as a barrier. This study premises with the aim to determine if contract specification is a barrier for SMMEs access to procurement services. The study was conducted within the Electricity Utility environment of eThekweni Municipality: Electricity Unit (eThekweni Electricity). This descriptive quantitative study used eThekweni Electricity officials/Employees which are Engineers and Contract Site Supervisors (Clerk of Works) as well as eThekweni Electricity bidders (potential contractors) as participants with the aim to determine if contract specifications is a barrier to SMMEs access to eThekweni Electricity procurements services. The study primary data was collected through a web-based survey questionnaires on a random sample size of 80 eThekweni Electricity Employees and 140 bidders and analysed using SPSS statistical tool. The response rate was 64% for eThekweni Electricity employees and 41% for eThekweni Electricity external bidders.

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