Perceptions of public procurement practices by engineering consultancy firms in Kenya

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PERCEPTIONS OF PUBLIC PROCUREMENT PRACTICES BY ENGINEERING CONSULTANCY FIRMS IN KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or o any other institution. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the thesis itself.

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ABSTRACT

Public procurement has a key role to play in the promotion and development of local industries and sectors. Despite the fact that public procurement is becoming a popular technique in empowerment of local businesses such as the local engineering consulting firms there are various challenges that the firms perceive as barriers in their quest to access public procurement opportunities. The main objective of the study was to determine and assess the perceptions of the public procurement processes by the engineering consulting firms. The study targeted the senior managers of engineering consultancy firms as well as the road authoritiesô procurement managers who were the key informants. The study adopted the descriptive research design survey where the primary data from the engineering consulting firms was collected using questionnaires whilst interview guides were used in interviews with the key informants, the road authoritiesô procurement managers. The collected data was then analysed using descriptive statistics analysis techniques to determine the distribution and dispersion of the different variables whereas content analysis approach was used in the review of documents and manuals as well as the interviews with the road authoritiesô procurement managers. From the findings, the elements of the public procurement practices in procuring of consultancy services were identified and also revealed the perceptions of the practices, evaluation criteria and the public procurement performance that had positive and negative influence in the participation of public procurement by the engineering firms. The key result of the study is that it generates explanatory theory on the barriers to public procurement thereby acting as a guidance to engineering consulting firms, the government and policy makers to collaborate in design programs and formulate procurement policies that will facilitate and stimulate the growth and development of the local engineering consulting firms and hence help in improving their growth and development. The insights from this study can also contribute towards ongoing discussions on the significance of public procurement policy on small and medium sized enterprises development. Additional research is needed to improve the existing body of knowledge about SME-friendly procurement practices especially within the knowledge based industries.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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DEDICATION

This dissertation is dedicated to my Family, for their love, support, encouragement and inspiration provided towards my research journey. Secondly, to my great friends who were always there and pushed me and made sure that I made it. All in all, to God. For the grace and sanity, He provided.

LIST OF ABBREVIATIONS AND ACRONYMS

ACEK	-	Association of Consulting Engineers of Kenya
GDP	-	Gross Domestic Product
FIDIC	-	International Federation of Consulting Engineers
GoK	-	Government of Kenya
KeNHA	-	Kenya National Highways Authority
KeRRA	-	Kenya Rural Roads Authority
KNBS	-	Kenya National Bureau of Statistics
KURA	-	Kenya Urban Roads Authority
MoTI	-	Ministry of Transport and Infrastructure
PPDA	-	Public Procurement and Disposal Act
PPOA	-	Public Procurement Oversight Authority
RFP	-	Request for Proposal
SME	-	Small and Medium Enterprise

CHAPTER 1: INTRODUCTION

1.1 Background of the study

Governments are significant players in the marketplace. They participate in the marketplace via the procurement of goods, services and works. The public procurement spending expenditure makes up for a significant portion of any governmentôs expenditure. According to OCDE (2011), the average, public procurement expenditure accounts for 12 to 20 per cent a countryôs GDP and in Kenya, it stands at approximately 26.3% of the countryôs GDP (KNBS, 2015). This shows that governments tend to the largest buyers of goods and services and therefore puts it in a strong position to influence ad develop a sector or industry through their behaviour in the market (Caldwell et al., 2005). In some sectors or industries, government can even end up being one of their most important sources of sales. This is mostly the case for the construction, health, research and development, energy and transportation sectors.

In the global economic and business circles, public procurement has become an increasingly important factor and this is evidenced by the growing interest in the procurement sector by donors, governments, civil society, professional organizations, the private sector and the general public. Governments through public procurement can channel and accesses large volume of resources and through its policies, it can shape the long term effects of a nation and/or an industry (OCDE, 2011). Most of the policy formulation has been informed by the key role of government has been playing through procurement in promoting economic and social development in order to build the countryôs economies. This has led to studies focusing on the socio-economic implications of public procurement (Walker & Brammer, 2009).

Governments are using the public procurement to support the development of domestic industries, overcome regional economic imbalances, and support minority or disadvantaged communities (Mukura, Kanda, & Ngatia, 2016). By harnessing their purchasing power, governments can create market opportunities for small and medium sized enterprises (SMEs) through increased participation in public procurement. It is recognised that SMEs are key drivers in the growth and development of a countryôs economy (Ihua, 2009). As Day (2000) articulated in his study, SMEs are valuable and important as they are known to provide opportunities for the achievement of government objectives such as employment generation,

economic innovation and development of capabilities. On the other hand, SMEs are considered a special risk group, vulnerable, have insufficient funds and dependent on few clients and for this reason they require special support to survive in a competitive market and this is also true in the public procurement market where they face challenges too (Glover, 2008). Around the world, in Europe, Asia and USA, efforts are been made to promote SMEs access to public procurement in the aim of encourage innovation and increase competition (Perry, 2011). The focus has been on use of government contracts to support SMEs.

Public procurement market is quite large as a result of the needs of the various government institutions. This represents a tremendous opportunities for local firms and enterprises. Therefore there is need to clearly recognise the challenges and barriers, perceived or real hindering the firm from public procurement and the necessary steps to address them and enhance local firm access to the public contracts. This will consequently lead to influence the local firm success and ultimately economic development.

This study is focused on the local civil engineering consulting sector, a critical sector in the construction industry. Engineering consulting sector is responsible for the planning, design, delivery and maintenance of building and infrastructure making it a critical sector within construction industry and ultimately to development of any nationôs economy (FIDIC, 2011). With the Kenya government spending over half of the countryôs capital budget, on the development and maintenance of infrastructure projects with over 90 per cent allocated to the payments for the works, goods and consulting engineering services and other construction related services (KNBS, 2015). There are extensive opportunities for domestic engineering services sector and therefore the need to formulate and implement policies that encourage the participation of local engineering consulting firms in public procurement thereby growing and developing the sector and its participation in public procurement.

1.1.1 Engineering Consulting in Kenya

The International Federation of Consulting Engineers (FIDIC) defined engineering consulting firms providing engineering consulting services as independent, for-profit, organizations supplying technology-based intellectual services on a fee-for-service basis (FIDIC, 2002). In short, it is a business providing knowledge based professional engineering services. These services include providing advice on engineering matters, design, monitoring, supervising and administration of building, construction of infrastructure projects. Its client

base is mostly government and its agencies, however, also includes contractors, investors and industrial firms. This is due to the fact that governments invest heavily in development of infrastructure which is closely linked to economic development (FIDIC, 2011). Its demand is determined by investment and spending in construction industry and this is influences by countryôs economic development and government investment on infrastructure development (Baark, 1999).

The engineering consultancy services market is volatile and fluctuates with government spending on infrastructure and growth cycles in manufacturing industry (Baark, 1999). The barriers to entry into this market are low but it is also strongly impacted by political decision making. According to FIDIC, firms cite price competition and low fees as their main threats and economic downturn, corruption and unfair competition from government agencies as other significant threat to their business (FIDIC, 2004).

In countries such as UK, Germany, Netherlands, the engineering consulting sector is quite large for example in Germany, there are over 90,000 registered engineering consulting firms and they are mainly small engineering enterprises. In a 2008 report, the turnover for engineering consultancy service in UK was approximately Euro 50 billion per year, making it the largest in Europe (ING Bank, 2008). This just demonstrates the potential market existence especially considering the influx of investment and upsurge of commitment to development of infrastructure. In sharp contrast, such data especially the turnover and revenue from engineering consulting services is difficult to come by in Kenya. This may be because there is little focus given to this sector of the construction despite its critical role to the countryôs economy. This may be due to the fact that engineering consultancy services accounts for merely one to two percent of a project lifecycle costs, a fairly small fraction of the total project costs (InfraGuide, 2006).

In Kenya, the engineering practice is regulated by Engineering Board of Kenya, statutory body established under Engineers Act 2011. Its development is important in the achievement of the countryôs development blueprint. The EBK Board is responsible for the registration of engineers and engineering firms, regulating standards in the engineering profession and building capacity of both individual engineers and engineering consulting firms. In Kenya, the growing construction industry, the deregulation of public services sectors, the limited engineering capacity in public sector that has led to increased outsourcing in the public sector, has increased the demand for the engineering services. For engineering

consulting firms to be viable, to grow and to remain relevant they have to be provide services to each clientôs requirements with high degree of professionalism (Hamdan 1999), they have to meet the client needs and wants and in this case the biggest client is the government.

FIDIC broadly categorises engineering consulting firms into two. There are the engineering consulting firms that provide a single service to their clients or several services to a specific sector for example roads sub-sector or real estate. These firms are usually small and medium sized and to compete they usually seek strategic alliances such as joint ventures with larger firm. Then there are those firms that provide multi-disciplinary services to their clients. They are usually large and grow in size through mergers, acquisitions and expansion, both geographically and in terms of capability (FIDIC, 2004). In Kenya, according to the Engineers Board of Kenya records, most of the registered engineering consulting firms are small to medium sized firms providing single services. However, there are a number of the registered firms that are now offering multi-disciplinary services. In terms of ownership, the firms are independent and owned privately by individuals or by a group of people. Some of these firms came together and formed an association known as the Association of Consulting Engineers of Kenya (ACEK) so as to promote the engineering consulting profession for the member firmôs business interests and it is affiliated to the International Federation of Consulting Engineers (FIDIC) which umbrella body of global engineering consultancy industry.

In Kenya, it is difficult to estimate the size and scope of the market for engineering consulting services is due to lack of up-to date data. However, FIDIC estimates the market for the engineering services at USD 146 billion in 1999. In 2009, ENR (2010) reported that the revenue for just 200 design firms was USD 112 Billion. Though this refers to the outside market, this demonstrates the potential market existence in Kenya and Africa where there has been an influx of investment and upsurge of commitment to development of infrastructure.

In terms of size of the firms, FIDIC found that the largest category of the firms are small and have less than ten employees. They estimated that about 60 ï 70% are SMEs with less than 50 employees and with a turnover of less than USD 10 million. These SMEs account for about 10 ï 20% of industryôs total turnover ((FIDIC, 2002). Based on the FIDIC definition, most of the registered engineering consulting firms in Kenya are SMEs. They are small corporate or owned by group of people or individual though the EBK records do not provide information on number employees or the firmôs turnover.

The engineering consultancy firms are expected to possess the expertise and deliver solutions that merge a range of aspects and meet the client needs as communicated in the procuring document (Hobday, 2000). The level of competency present is considered a major differentiator when comparing firms. The engineering competencies and expertise have to be continually updated and developed which often occurs as a result of engagement in various engineering projects, where they are able to learn and innovate and it is argued that this is often driven by client demands within the projects (Koch and Bendixen, 2005). This means that firms have to continual source for opportunities that will advance their growth. It is therefore crucial for local firms to target the right kind of projects and government being their major client should install efforts that will promote access to these opportunities. (Løwendahl *et al*., 2001).

1.2 Problem Statement

According to KNBS, the construction industry has been on a steady increase driven governmentôs objectives to develop the countryôs infrastructure (KNBS, 2018). By virtue of its relationship with the construction industry, there must also be an increased demand for engineering services though the numbers have not been provided. According to a study by Dihel (2010), the local engineering consulting firms in Kenya mainly constitutes of small to medium sized firms. It is expected that these firms should be able to secure many of the contracts that are available in the construction sector. However, review of annual reports by road authorities showed that there has been an increase in the number of foreign engineering consulting firms winning contracts. This means that the engineering consultancy market is changing especially the level of competition which is on the increase.

The engineering consultancy market is changing and the consultants are in need of changing how they present their business so that they can continue to be competitive in the future especially with the growth in international trade and globalization. To be competitive, there is need for the consultants adopt a business model that is more marketable and have to be procured based on competency and less focus on pricing (Imamovic, 2015). To date, there is little evidence to show that the local engineering consulting firms have performed up to capacity or fully realised their expected vibrant role in the development of the local construction industry. Mayaka and Prasad (2012) in their study on the strategic issues and challenges in the engineering firms in Kenya noted that one of major challenges faced by the firms was the high competition from foreign engineering firms entering the market. This

means that there is need to focus and develop strategies that can aid in the development of the local engineering consultancy services sector to build up its capacity and performance. Local engineering consulting firms must position themselves strategically within the market so as to win contracts and continuously developing their competencies and quality of services is critical so as to continually improve their competitiveness.

In his research on development of consulting profession in developing countries, Kirmani (1991) identified constraints such as poor policies, procurement procedures and government practices as hindering the development of local consultancy. From the consulting firmsô perspective, the most cited challenge is the poor procurement practices resulting in the inhibition of fair competition (Christodoulou, 2003). This demonstrates the central role public procurement play in development of a sector. Through its public procurement procedures and policies, the government can stimulate a sector by making it more efficient, integrated, transparent and thereby globally competitive. Studies on SMEs (Binniyat et al., 2008; McCrudden, 2004), have shown that SME friendly public procurement policy has helped them to grow and develop eventually improving their competiveness as it increased their participation in public procurement. This should not be any different with focus on local engineering consulting firm.

Therefore there is need to determine clearly what aspects of public procurement influence local engineering consultancy firms so to develop strategies that can help to promote and develop their competencies improving their participation in public procurement.

1.3 Research Objectives

1.3.1 General Objective

The main objective of the study was to evaluate the perceptions of engineering consulting firms on public procurement practices that may be affecting their participation in road projects

1.3.2 Specific Objective

i. To determine the perceptions of the public procurement practices by the engineering consulting firms.

ii. To assess engineering consulting firmsô perceptions of public procurement evaluation criteria.

iii. To determine the engineering consulting firmsô perceptions of the public procurement agency performance

1.4 Research Questions

i. What are the engineering consulting firmsô perceptions of the public procurement practices?

ii. What are the engineering consulting firmsô perceptions of evaluation criteria used in selection of preferred bidder?

iii. What are the perceptions of the public procurement agency performance

1.5 Scope of the study

The study was conducted within the county of Nairobi, Kenya. This is because most of the local engineering consulting firms have their registered offices as located in Nairobi. The target was the engineering consulting firms who are members of the Association of Consulting Engineers of Kenya (ACEK) and have provided services to any or all of the road authorities. In addition, senior managers of the road agencies will be interviewed as key informants to provide information on the public procurement process and the adopted procurement strategy for consultancy services.

1.6 Justification of the study

Road infrastructure is one of the most important public assets in Kenya and Kenyaôs road network length is estimated to be about 177,800 km with an estimated asset value of over KShs 2.5 trillion. In the 2017/2018 Kenya budget, approximately KShs 110 billion was allocated to the roads sector. According to the Road Sub-sector Investment Programme and Strategy 2010-2024 (RSIP, 2011) there is need to have a substantial improvement of consulting capacities within the Roads Sub-sector. The management, development, rehabilitation and maintenance of these roads is done by the road agencies that were established through the Kenya Roads Act, 2007. These road agencies are the Kenya National Highways Authority (KeNHA), Kenya Urban Roads Authority (KURA), and Kenya Rural Roads Authority (KeRRA). The KeNHAôs mandate is the management, development, rehabilitation and maintenance of international and national trunk roads, the Class A, B and C

Roads, whereas KeRRAôs mandate is for the rural roads namely Class D, E & Others; and finally, KURAôs whose mandate covers the urban roads in Kenya.

Emanating from this background, the study focussed on engineering firms providing consultancy services for design and supervision of road projects to these three agencies. This is because the road agencies by their sheer purchasing power, they are in a position to influence and build the capacity of consultancy firms. Through deliberate and targeted efforts they can encourage full participation by local firms in road sector opportunities and thereby increasing the competitiveness of the local engineering sector.

For the government and the road authorities, the study will assist in the formulation of policy to promote local firms participation within the road sectors. It will also assist the road authorities, to design programmes aimed at promoting local consulting capacity as per the objectives of Road Sub-sector Investment Programme and Strategy 2010-2024.

The engineering consulting firms will be able to obtain information in public procurement practices within the roads sectors that will enable them to effectively participate in the public procurement processes. In addition, they will gain knowledge of the barriers and challenges that they face and be able to engage the government and its agencies effectively on how these barriers ad challenges can be removed so as to promote the development local engineering consulting industry.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter discusses the relevant reviewed literature in areas of public procurement and consultancy services .The issues discussed include the theoretical review of public procurement and the empirical study on the procurement of engineering consultancy services. The chapter also presents the conceptual framework that will be adapted in conducting the study.

2.2 Theoretical Approach to Public Procurement

A theory, a defined set of statements that tries to explain a group of facts especially those that have been tested or widely accepted is used to explain about natural phenomena. Theories are vital in any research because they form grounds for explaining relationships between study variables (Connelly *et al.* 2011). Scholars use theories to explain their areas of understudy.

2.2.1 Agency Theory

Agency theory has been adopted to explain the public procurement system. Agency theory is used to describe an agency relationship, where the principal gives work to an agent who executes the work (Eisenhardt, 1989). According to the agency theory, an agent is the one who acts on behalf of or represents the other party, referred to as the principal. The agency relationship appears whenever a party must rely on acts of the other. It typically assumes the form of formalized contract, under which the principal engages another person (the agent) to perform specific projects on its behalf, delegating decision making (Jensen & Meckling, 1976). Agency theory is founded on the assumption that there is always information asymmetry in any form of relationship whenever one party is acting on behalf of or represents the other party, the principal. As Chrisidu-Budnik and Przedańska (2017) explained the analysis of the agency relationships aids in the identifying of the relativity and variability in agency relationships.

Accounting officers and procurement managers in the public agencies are agents for the government. They are required to comply with the procurement rules and regulations which may result in a principal - agent problem. The PPDA, (2015) bestows the responsibility of compliance with public procurement policy on the procurement entities. The

theory is useful in explaining the relationship between the Government and road agencies in compliance to build local capacity and relevant in explaining how the actions of the agent affect principal.

In the public procurement process of engaging service providers, accounting officers and procurement managers in the public agencies are the principal and have to engage the service providers, in this case the engineering firms, as its agent to fulfill their objectives by contracting out tasks. The contracting out of tasks between the public agency awarding the contract and the private entity, the consulting firm, can be analyzed through agency theory thereby guiding the drafting of contracts to address each partiesô responsibilities and what they can and cannot do. As Eisenhardt (1989) explained agency theory explicitly address the aspects under which contractual arrangements and the relationship between a principal and an agent operates most efficiently. It can be also used to look at both the legal and social aspects of the contract. Logan (2000) explained the agency theory is used as the basis of developing the most efficient contract to govern the principal-agent relationship. Agency theory can be used to help design the most effective types of contracts and relationships to provide fair outcomes to all parties. It is through the contracts that the asymmetry of information is minimized.

The analysis of public procurement system from point of view of agency theory also reveals the limitations that exist in the system notably the asymmetry of information that exists affecting both parties in the course of fulfilling their obligations. There are various decisions and actions that have to be made from the beginning of the public procurement process by the road authority, principal, and this determines the conduct of the consultant, agent, and the effects of fulfilling the contract as early as the start of the process of awarding the public contract. Most of these decisions that outline the relationship are defined by the public agency which has been tasked by the government with ensuring that there is compliance in terms of the law and regulations of public procurement and at the same time are able to ensure that they articulate their needs and expectations in the terms of reference. Therefore, through analysis of public procurement through the agency theory can be used to define the procedures that can be followed in the public procurement process, define the evaluation criteria and the behavior and actions of public agencies that would encourage the participation in the public procurement opportunities.

2.3 Public Procurement System in Kenya

Public procurement is one of the governmentôs core activities and it has a great impact on the development of countryôs economy in industries such as construction, transportation, energy and telecommunications and many others. As stated earlier, public procurement accounts on average for 19% of the World GDP and in Kenya, it accounts for slightly over 26% of Kenyaôs GDP (Jeptepkeny, 2015; KNBS, 2015) and this just demonstrates the key role of public procurement in the countryôs economy. It is an important tool in achieving of government objectives notably employment generation, promotion of economic growth and social development. This kind purchasing power can create market opportunities for local enterprises across the various industries through increased public procurement participation and the consulting engineering industry is no exception.

Kenyaôs public procurement framework has undergone significant developments and over the years. It has developed from crude public procurement framework with little regulation in the 1960s to an orderly regulated public procurement system presently (Public Procurement Oversight Authority, 2007). The current public procurement framework is underpinned by key principles namely value for money, integrity, competition, transparency and accountability. These principles govern the framework for the code of conduct for all public officials associated with the public procurement process and serves as the guiding principles in the decision-making process. The main aim of public procurement is namely to maximise economy and efficiency; promote competition and fairness amongst competitors; integrity and fairness of the procedures; transparency and accountability in the procedures; increase public confidence in the procedures; and the facilitate promotion of local industry and economic development.

The legal and regulatory framework in Kenya consists of the Public Procurement and Asset Disposal (PP&D) Act, 2015, and Public Procurement regulations. The public procurement framework through the PPOA procurement manual outlines the procurement methods and procedures to be applied in the procurement and disposal by public entities and consists of detailed rules and procedures for all aspects of procurement and the conduct of procurement activities. It also consists of standard tender documents and manual for the conduct of procurement by the public agencies. These documents provide step by step procedures to be followed in the procurement process. (Public Procurement Oversight

Authority, 2007). Procuring Entities are responsible for carrying out all the procedures pertaining to the complete procurement cycle as outlined in *Figure 2-1* below and this is outline in Public Procurement and Disposal General Manual prepared by PPOA. Each of the steps has to properly documented and approved by the designated authority. All procurement documentation shall be properly filed.

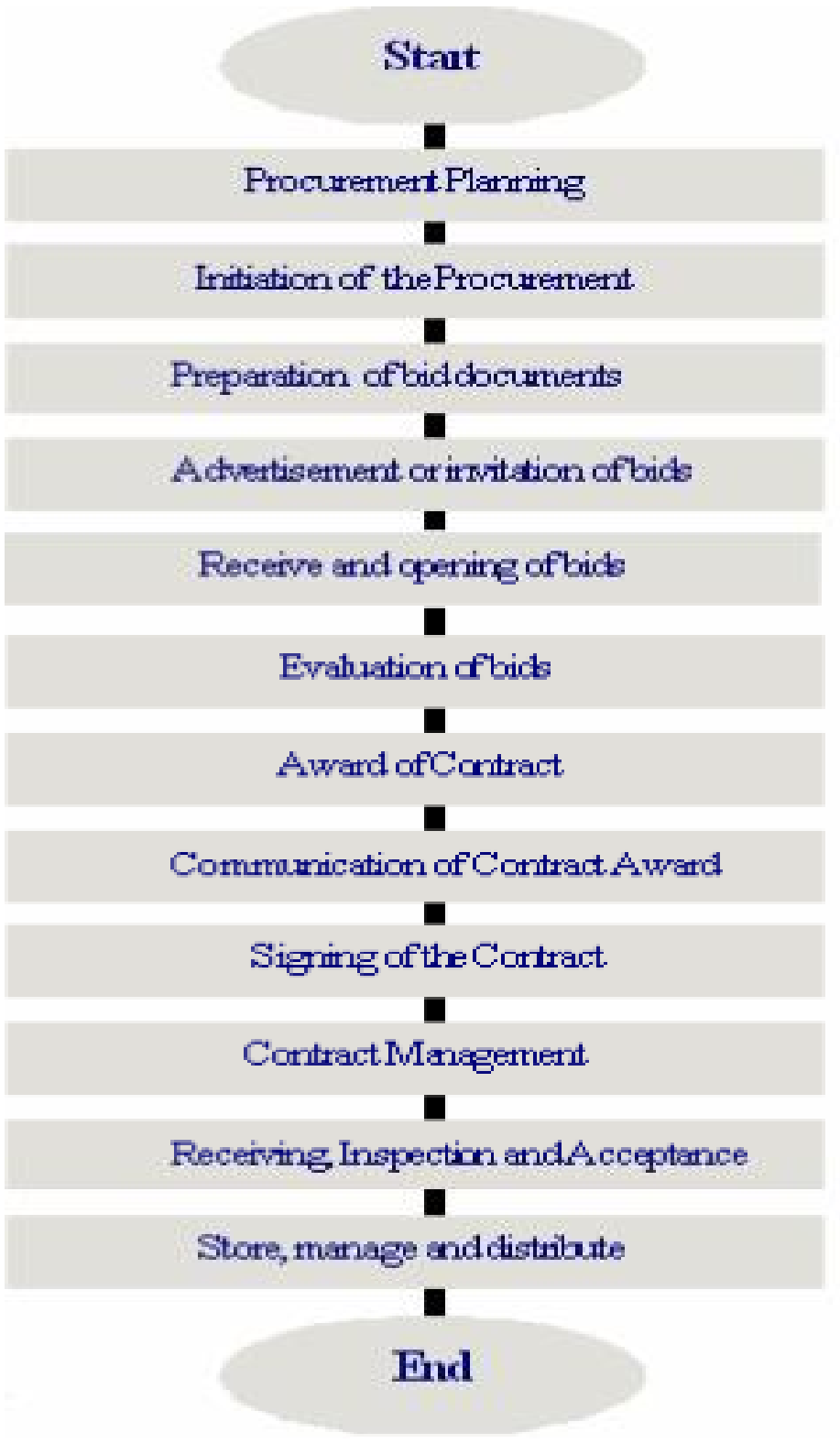

Figure 2-1: Complete Procurement Cycle process

As advocated by the OECD, the whole public procurement system is set up in such a way so as to inspire confidence and willingness to compete of prospective bidders for the various opportunities and it also benefits the procuring entity and thereby the government and ultimately the public.

As stated earlier, public procurement systems are set up to fulfil a number of objectives among them being efficiency, economy, equity and integrity (Kelman, 1990; Dekel, 2009). Despite these intentions, Kiagie (2013) study revealed that there are still challenges of inefficiency and transparency faced by enterprises participating in public procurement. This therefore requires, that the whole process is understood by the principle actors i.e. the procuring entities and the enterprises/suppliers as well as other stakeholders such as policy makers and the general public.

Also public procurement has also been characterized by delays, poor quality delivery of goods and services, and costs escalation to the governments (Shirima, 2009). This has led to one of the major challenges faced by governments, where most view the public procurement process as a haven of corruption, inefficiency, incompetency and high risk and thereby not creating confidence for the public and private sector. This has led to lots of scrutiny from taxpayers, citizens and stakeholders and thereby private sector firms tend to avoid the public procurement process to protect them against incurring losses that may be incurred by participation.

The current trends of globalisation and rapid change in technology are proving a challenge to the public procurement process. With increased globalization, governments are faced with another challenge of the need to balance between complying with government regulations and adhering to trade agreements. Governments have to determine how to strike a balance between promoting the local companies and providing unrestricted access to the markets by the foreign companies as a result of trade agreements. On the other hand, the rapid changes in technology and innovation are more present in the foreign companies and the government finds that the domestic suppliers are slow to adopt the latest technology. Therefore the government finds itself tasked with the challenge of striking a balance between efficiency and promoting local expertise. One of the approaches advocated to allow for transfer of technology is the requirement of joint ventures.

2.4 Public Procurement of Consulting Services

The public procurement process is fairly standard all over the world. The public procurement process involves project identification and preparation of procurement plans; the tendering stage which covers preparation of tender documents, invitation of bidders, bid evaluations, awarding of tender and Contract signing; the implementation stage involving

contract administration inspection and commissioning or acceptance of goods, works and/or services procured; and finally the storage and inventory management (Public Procurement Oversight Authority, 2007). This is aimed at controlling the costs and encouraging efficiency, competition, integrity, fairness, transparency and accountability.

The procedures for the procurement of services are different from those for procurement for goods and works. The procurement of consultancy services is covered in its own section in the PP&D Act, the Part 10 of the PP&D Act. It stipulates the method and process for procurements of consultancy services in Kenya. The main reason for having it as a separate procurement method for services has been attributed to the unique ñintangibleò nature of services, unlike a good or product which can be measured and verified physically.

2.5 Empirical Review

This section will deal with studies that have been done by others in the area of public procurement participation by enterprises notably the SMEs. The empirical shall look at the main objectives which shall cover the independent variables of the study which are perceptions of public procurement procedures, perceptions of evaluation criteria and how that affects participation in procurement opportunities.

2.5.1 Public Procurement Processes and Practices

Procurement practices have a large influence on the prosperity or survival of many businesses or industries (Copenhagen Economics, 2008; Office of Fair Trading, 2004). The public sector has played a big role in promoting socially and environmentally responsible business practices. The focus has been on use of government contracts to promote business development. Governments develop procurement practices that are tailored to fulfil the needs of different project objectives. Procurement practices that are implemented successfully create confidence in regards to the procedures as well as the effects and outcomes of these procedures. However, Makabira & Waiganjo (2014) indicated that the procedure of procurement (tendering, evaluation of bids, selection of subcontractor, and self-control of the contractor) has a general positive influence on the performance of a project (time, quality and cost) as well as development of enterprises.

Local firms notably the small and medium sized firms are often cite frustration in the participation in the procurement process due to various challenges that they encounter. These are discussed herein. In terms of public procurement participation, studies have focused on

the challenges within the procurement process that enterprises especially SMEs, face when accessing public procurement contracts. Valkokari and Helender (2007) for example stated that in the awarding of contracts, public agencies tend to have preference for larger firms. Pittaway and Rose (2006) outlined the challenges to be those related to the difficulty in obtaining information about contract opportunities, inability of SMEs to meet the prequalification criteria and insufficient time to respond to tender; Macpherson and Holt (2007) in their study cited the cost of tendering and excessive documentation requirements, as factors which discourage SMEs participation in public procurement and this stemmed from the fact that bidders were asked to provide some sort of bid security which is often difficult for small to medium sized firms. It is important to establish their challenges and problems in the public procurement practices, so as to determine what kind of interventions may be required.

A study by Kenya Anti-Corruption Commission (2007) revealed that the challenges such as inefficiency and lack of transparency were still faced by enterprises when accessing public procurement opportunities despite the introduction of public procurement regulations. In addition, there is the general opinion that public procurement procedures discourage public procurement participation by the small to medium sized firms and thereby curtailing their development despite the aim of public procurement to build local industries. This creates the perception that public procurement practices are out to negatively influence on enterprise development and some of these procurement practices are discussed.

In terms of procurement methods, the PP&D Act of 2015 proposes several procurement methods to be used in the procuring of consultancy services. The use of open tendering is the preferred choice of procurement procedures by the public entities. it tends to be the default method as it is perceived to provide the highest possible of competition due to the sourcing from a large base (Roodhooft & Van den Abbeele, 2006). The proponents of this argument cite that the public agencies are able to take advantage of lower costs through the competition, less supplier dependency, wider access to markets and technologies (Trevelen & Sweikhart, 1988) though it is strictly procedures based. This is usually to the advantage of the buyer. However, for the seller/suppliers cite disadvantages that are associated with open tendering such as higher administrative costs (Cooke, 1998), increased length of time required to complete the procurement process, the required strict adherence to procedures - inflexibility, suppression of innovation, and it is excessively formal (Kumar et al., 2005).

For the SMEs who generally suffer from restricted access to resources find the method burdensome especially when they have to compete against larger firms with resources and are able to absorb these costs thereby discouraging their participation. On the other hand, this method provides an opportunity for them in public procurement.

According Odhiambo and Kamau, (2003), SMEs in Kenya have complained of lack of access to information on available opportunities, poor accessibility to contracting bodies, inadequate advertising of the opportunities. Difficulty in obtaining information of contract opportunities available and insufficient time to respond to tenders have been highlighted by Pittaway and Rose (2006) as one of the challenges that discourage the participation of enterprises notably SMEs in public procurement process thus curtailing their growth and development. It is only when SMEs or firms know of existing opportunities that they can write a proposal or prepares a bid submission. A common complaint among businesses is that they are now aware of or know how to access public procurement opportunities. According to Lavassani et al., (2008), most public procurement systems address in one way or another issue of how to provide information support for the domestic supplier base. Therefore to address this, countries through their public agencies have established websites and web portals to publish all the opportunities. In Kenya, procuring entities are required to publish their opportunities in their website, newspaper of wide circulation and on governmentôs procurement portal popularly known as IFMIS

The procurement procedures for consultancy services require the procuring agency prepare and issue a Request for Proposals (RFP). The RFP outlines to proposed bidders the selection criteria, specifications, requirements, scope of work and terms of the engagement. The tender documents should be clear, well-prepared and easy to understand so as to solicit the right response. Lack of clarity of tender requirements a discourages participation and according to Sporrong *et al*, (2005), the procuring entity has to formulate the needs, determine and specify the award criteria that should be clear, specific and comprehensive to get the best out of the tenders. Upon accessing such kind of the RFP, the bidder can act upon the request to meet the specific needs once they understand the purchaserôs requirements and determine they can meet them. Unclear specifications, terms of reference lead to non-responsive bids which means that the prospective bidders cannot be selected for these opportunities and lose out.

Contract aggregation refers to bundling of works into fewer, larger contracts so as to be tendered less frequently. Clients prefer it because it has a large effect on cost components such as purchasing price and operation costs (Linthorst et al, 2008). The prices are lower due to the economies of scale (Sheridan, 1998); reduction in the procurement administrative costs (Stork, 1999) and stimulates investment by winning supplier due to increased volume of work (Office of Fair Trading, 2004). However, its major shortcoming is the reduced competition as only capable bidders, normally larger firms, will go for such opportunities (Office of Fair Trading, 2004). This practice also tends to excludes smaller firms as most are unable to meet the contract requirements. To promote SMEs participation, there is need to appropriately size contracts based on their capacity (Copenhagen Economics, 2008).

In the Glover Report, SMEs in the UK cite that the time consuming paperwork, disproportionate evaluation criteria as impediments to SME participation in the public procurement process (Glover, 2008). In similar vein, small business has also been discouraged from participation in public procurement due to the large size of contracts. The reason given includes the lack of capacity to be able to effectively participate in public procurement as they are unable to meet the requirement.

In regards to the contracting award methods, the public procurement regulations allow for two features or routines in the procurement and selection of consultants namely the merit point system and two envelope system (PPOA, 2015). The merit point system is where the point scoring basis is used to select the winning consultant. Points are awarded to technical criteria as specified in the RFP. The bidder with the highest score will be selected as the preferred bidder and the procuring entity will commence negotiations. In the two-envelope system, the technical and financial proposal is submitted in separate envelopes. The financial proposal will only be opened and scored once the technical proposal evaluation is complete and approved. The technical proposal evaluation takes the same basis used in the merit system where the criteria defined in the RfP are scored. The technical scores are then combined with financial score and the highest combined score is awarded the contract. The weightings for these always have to be included in the RfP. This is the most preferred method of award for consultancy services across the globe (Sporrong *et al*, 2005). This is adopted to downplay the influence of price in the evaluation. However, opponents of these methods have cited that once there is inclusion of price, the focus changes from quality to costs. Also, for SMEs there is also the issue of disproportionate scoring and contract award (Kaspar &

Puddephatt, 2012). They find the scoring system lacks transparency as they are unable to determine how the marks or scores were reached at. The lack of communication of reason for unsuccessful bids by procuring agencies has been cited as one of the reason of creating such perceptions. The lack of communication creates perception that there is preference for larger firms or existing service providers.

Other aspects that discourage SMEs participation in public procurement that have identified are lack of skills in preparing good bids by the firms, costs involved in tendering and excessive tender documentation requirements (Macpherson & Holt, 2007) which stem from the requirement to provide performance bonds and other types of bid warrantees, which are difficult for SMEs to meet (Akenroye & Aju, 2013b).

Other aspects that have been identified from the study conducted in Kenya and Tanzania shows that incessant corrupt practices in tender process, lack of the skills to submit compliant bids and awareness about contract opportunities are what discourage most SMEs from participating in public procurement (Odhiambo and Kamau, 2003).

In regards to transparency and communication, the public procurement procedure should be transparent to encourage the firms to participate in the process. In theory, transparency implies visibility within an institution/agency. This means that whatever decisions made as well as their enforcement are conducted in ways that follow stipulated procedures. It also implies that information regarding a decision and its enforcement is available freely and directly accessible to the individual/agencies that have been affected by respective decisions and their subsequent enforcement. Therefore as part of the public procurement procedures, the information should be available to bidders in timely and easily accessible manner; the tender evaluation is objective and fair, communication for award done in a timely manner ad unsuccessful tenders are communicated reason.

A study by Kiage (2013) revealed when the system is transparent compared to when the system is discretionary that bidders are encouraged to participate and tend to be bid more aggressively to the advantage of the Client. Other research work by Basheka & Bisangabasaija (2009) asserts that a competitive bidding system improves the openness and transparency in the procurement procedures with regard to demand contract. Improved transparency levels divert government resources away from works that could attract corruption as openness attracts more contractors in the bidding process.

2.5.2 Perceptions of the Evaluation Criteria

In his study, Sporrong (2011) found that the performance of consultants greatly influences the outcome of a project in regards to delivery time, costs and quality. Only suitable, competent and capable consultants should be selected for a project as the consultant. Consultants play a significant role in the success of a project as having incompetent consultants is known to lead to problems in design, planning, cost control and supervision, which in turn affect the time, cost, quality and risk levels of a project (Cooley, 1994).

In the bidding process, the procuring entity has to state how they intend to select the winning bidder. The criteria are usually a combination of non-price conditions such as quality, experience, time, service and price (Konkurrensverket, 2011b). In his research on the public procurement of architectural and engineering consultants in Sweden municipalities, Sporrong (2011) found that the most common selection criteria referred to was price criteria. This has also been supported by Roodhooft & Van den Abbeele, (2006). Research studies around the globe found that many governments or public entities, despite having the option of using either of the different methods in awarding tenders, they mostly awarded on a lowest price basis.

The non-price criteria considered are qualifications of key project personnel and their individual experience and education, organisation/firmôs experience, work methodology/ engineering aspects, and execution plans; in general, the engineering competency of the organisation.

As part of their research, Day (1998) and Sturts and Giffis (2005) have found out that the qualifications-based selection of consultants improves the quality of services provided unlike the use of awarding contracts based on price. The main objective is to use criteria that maximize the value of services. This in turn encourages the engineering consultant to focus on providing quality service and not to focus on appropriate pricing and costs to win jobs.

The procurement laws and regulations stifle the procuring public entity to develop appropriate selection criteria to suit their needs in the selection of suitable provider. Thereby, they have been made to focus on lowest priced bids whilst downplaying the non-price criteria.

As part of the selection or evaluation criteria, innovation and provision of sustainable solutions are largely ignored in the evaluation process. Scrutiny of Standard Tender

documents show there is little if any points given for innovation. This may be attributed to the fact that the construction industry has been found to be one of the most non-innovative industries characterised by slow uptake of new technologies often referred to as old-fashioned. In the review of construction industries worldwide, Dulaimi *et al* (2002) stated that the low levels of research and development activities and innovation is the main reason of the low development of the construction industry. Thereby, there is no basis for the evaluation of such criteria.

It is argued that for firms to develop and improve their competitiveness innovation is key, firms should be able to develop new product or service (Williams & Hare, 2012). In their research, Blindenbach ï Driessen and Van den Ende (2006), claimed that one of the success factors for innovation in construction projects is to have the service providers and suppliers involved from the onset of the development phase of the project thus improving the quality of the outcome and preventing delays. In his study, Daymon (2000) stated that the major barrier to the creativity is the focus by the consultants on fulfilling client wishes and therefore if the client expectations differ from the consultantôs, he will compromise on his ideas. By demanding high standards and identifying the specific requirements for a project, the overall performance will be improved. It is also important that the clientsô requirements are understood and the work is undertaken collaboratively. Clients are catalysts of innovation and this can be achieved through long term relationships and increased collaboration between the involved actors and ultimately the satisfaction of the client (Ozorhorn, 2010). This can start with its inclusion in the RfP or bid documents to encourage the firms to adopt new technology and be innovative.

2.5.3 Public Procurement Performance

The provisions of the Act and the Regulations have been found to be prone to abuses by public agencies during the procurement process and it also does not envisage the current market realities (Wanyama, 2010). In addition, it was suggested that the institutional capacity in the procuring agencies have to be improved as the lack of expertise within the agencies is compromising the efficiency and effectiveness of procurement operations.

In their research, Danis and Kilonzo (2014) asserted that decision-making decentralization in public procurement represented an important step towards realising a sound and efficient procurement system. With the current legal framework, the procurement

process is fully decentralised and therefore the responsibility of procuring lies with the procurement unit of the public agencies, the only condition being the stipulated threshold value provided in the procurement regulations.

Timely procurement is another critical aspect in the procurement process that needs to be improved on as it has an effect on the effectiveness of the procurement process. It is noted that the regulation does not provided for a clear provision on the timeliness of procurement operations. Long tender processes tend to be costly to companies or any entity and though the process cannot be rushed it is vital that the time taken is reasonable and fair.

Public procurement has a direct effect on the economic status of a country and therefore it is important that ethical standards are maintained throughout the procurement process. According to Jeppesen (2010) any procurement system should constitute the key principles of public procurement namely transparency and accountability thus enable the government and citizens to engage in a mutually responsive manner reducing cases of unethical practices. To ensure the transparency of the public procurement system, the Act has allowed for a number of control mechanisms such as an appeal mechanism by the Appeals Review Board (ARB), the first avenue of complaints, and an efficient Control and Audit System (PPOA, 2015) where vendors are granted the right to appeal procurement decisions. According to the legislation, a bidder has the right to appeal the procurement process and award decision if they feel that the procuring entity did not correctly follow the acts. The decision can be overturned or corrected if found to be in violation and has had an effect on the procurement results.

There is a growing concern that the public procurement process is becoming overly formalistic and cost focused and thus obscuring the public entity from attaining their goal of providing value for money. It is therefore necessary as stated by Sturts and Griffis (2005) research that in order to reverse the reduced profitability of the industry it is necessary that the all the actors i.e. the Client and the consultants to work together and the consultants should propose alternatives and profitable strategiesô for their Clients in order to create a more profitable industry.

In Kenya, embezzlement, conflict of interest, kickbacks, bribes, fraud and manipulation of tenders are the most prominent corrupt practices in the implementation of construction projects. The corruption practices influence the process and outcome of

procurement process leading to delayed project completion, inflated project costs or poor project outcomes. The scenario is similar in the procurement of engineering consultancy services where unqualified individuals or firms are rewarded with contracts that are beyond their engineering or financial capabilities. The malpractices are even more rampant in the devolved governments where government agencies have little capacity in monitoring the procurement procedures to ensure they comply with the laws of the country.

2.5.4 SMEs Participation in Public Procurement

Evidence supports the contention that accesses to government opportunities improve SMEs capabilities, competition and potential to enter other markets as well as boost economies (Procurement Policy Unit, 2001). However, these businesses face hurdle in winning these opportunities and the proportion of government contracts that go to SMEs offers considerable room for improvement.

Various studies (DG Enterprise and Industry of the European Commission; The Procurement Research Group, Dublin City University, 2013) have identified that the main barriers hindering access of SMEs from public procurement market includes excessive conditions imposed regarding ability of the firm to execute the contract, lack of financial support in providing bid bond and performance bonds, unclear evaluation rules, rigging, unclear specifications, excessive documentation requirements in preparation of the bid, insufficient time allowed to prepare bid, difficulties in collection of the bid documents, excessive bureaucracy, low level of buyer-supplier interactions and poor feedback.

In a bid to promote SMEs participation, countries such as South Africa and Egypt have implemented legislation specify legal quotas and caps for SMEs (Witting, 2002). Though such initiatives are lauded, the implementation is key and poor implementation leaves room for mismanagement through procurement cycle and thus becoming troublesome for SMEs, for who they already have other obstacles to overcome.

2.6 Conceptual Framework

The framework intends to examine and explain the factors that influence on the participation in public procurement of engineering consultancy services in Kenya within the public procurement space. The study is expected to determine the influence of independent variables on the dependent variable in an attempt to develop a framework for engineering

consultancy services participation in public procurement in Kenya. The firmôs level of participation in the public procurement process will be the dependent variable. This would be measured by analysing the number of tenders submitted; contracts awarded won, number of engineers employed in the firm, well as value of jobs won.

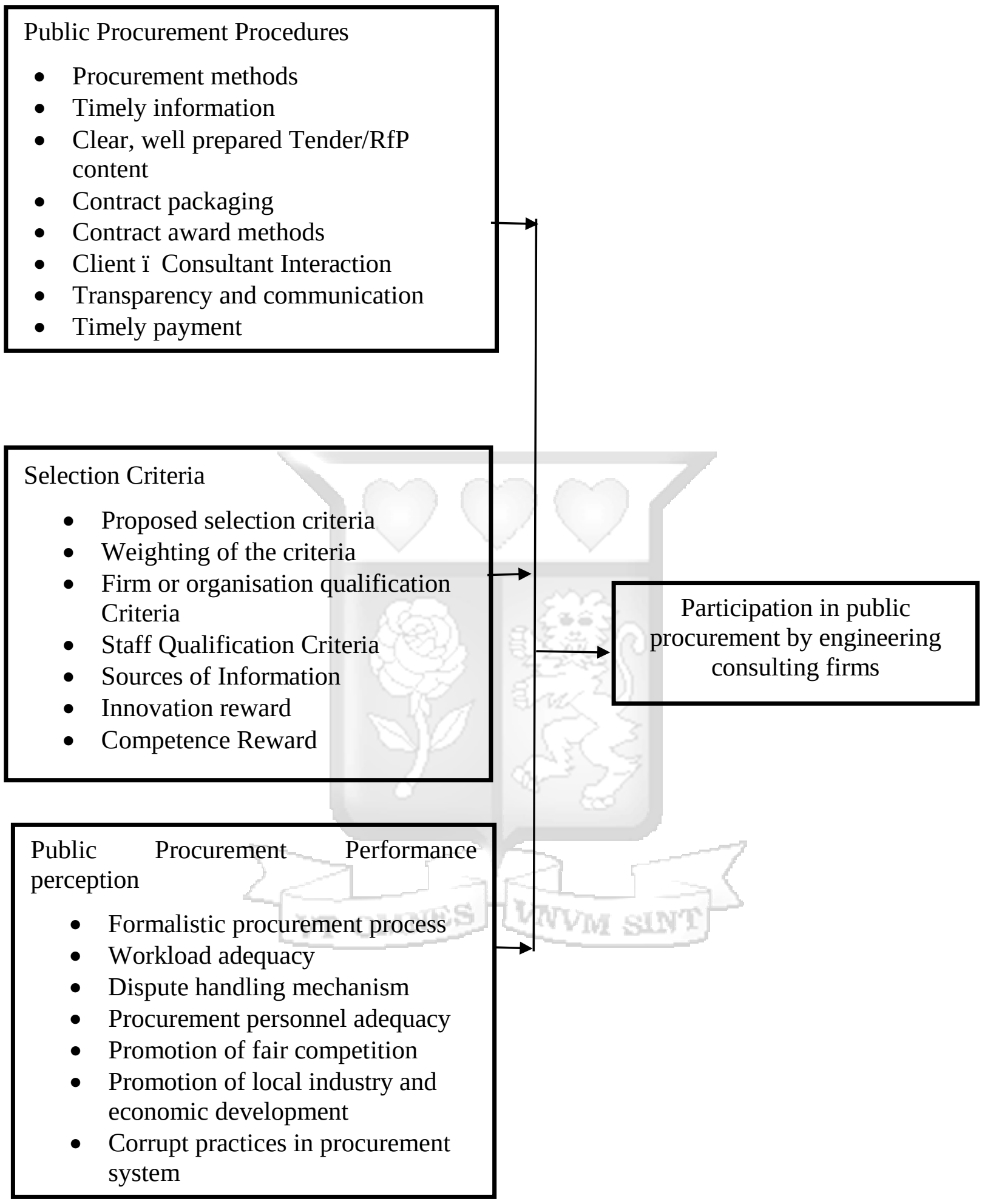

Figure 2-2: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology that will be adopted in the study. The chapter describes the research design, target population, sample and sampling techniques, data collection methods and the data analysis and presentation techniques.

3.2 Research Design

For the study, a mixed approach research design comprising of qualitative research and cross-sectional descriptive research design was adopted. Cross-sectional survey involves the collection of information with more than one variable from a given representative subset of a population at a single point in time which is then looked so at to detect patterns of connection (Bryman, 2004). A descriptive study aims at determining the what, when and how of a particular phenomenon, characteristics associated with a subject population, estimates of proportions of a population that have these characteristics and discovery of associations among different variables.

The qualitative research was applied to gain an understanding of the public procurement practices as applied by road authorities, their experiences and attitudes regarding the engineering consulting firmsô participation. The descriptive cross- section design approach was adopted for the purposes of identifying the perception of public procurement processes by engineering consulting firms.

3.3 Population and Sampling Design

For the procuring entities forming the key informants, the population was three road authorities involved in road construction and maintenance. Purposive sampling method was applied in the selection of respondent; one respondent from each of road authorityôs procurement department. The target was the senior procurement manager or the deputy senior procurement manager.

The population of sample is 67. All these firms are located in Nairobi with the exception of two firms. Due to the small size of the population, a census survey was adopted. The purposive sampling was also applied in the selection of respondent; one respondent from each of consulting firm. The target was the Managing Director or a Senior Manager in the firm.

3.4 Data Collection Tools and Procedure

Primary and secondary data was collected for this study. Secondary data was collected through the review of the procurement policy documents, manuals, and procurement records from the road authorities in order to understand the road authoritiesô public procurement practices and determine characteristics of procurement of engineering consulting services in terms of budget, cost of ender, procurement methods and awarding criteria employed.

In addition, the interviews with the key informants, road authoritiesô procurement managers were conducted so as to gain a deeper understanding of the public procurement practices as applied by the road authorities. The interview guide used is attached in Appendix 2. It was designed as open ended questions covering the following areas: public procurement procedures; evaluation criteria; and public procurement practices perceptions.

The primary data was collected from the engineering consulting firms using the self-administered questionnaires attached in Appendix 1.The questionnaire was designed into sections which information on the firmôs background and its level of participation in public procurement could be determined and assess the firmôs perceptions to the following aspects of public procurement: public procurement procedures, evaluation criteria and public procurement practices. This was based on Likertôs scale of five ordinal measures from one (1) to five (5) according to gauge their level of agreement to statements.

3.5 Data Analysis and Presentation

According to Saunders, Lewis, and Thornhill (2012), data analysis concerns editing, classification, coding and tabulation of data, which has been collected to facilitate easy analysis. The raw data was checked for consistency and accuracy. The data was input into SPSS in order to track the different variables and clean it up. The questionnaires were serialized in order to ensure there was no double entry. The responses were then coded with non-responses sections left blank. The data was analysed using descriptive analysis and content analysis techniques.

Descriptive statistics analysis was carried out to determine the distribution and dispersion of the different variables. The data was presented in frequency tables, graphs and charts. Measures of central tendency which include mean, median and mode were used to

score the results. Logical inference were there drawn accompanied by interpretations and discussions as per the objectives and research questions.

3.6 Instrument Reliability and Data Validity

A pilot study was carried out to pre-test and validate the questionnaire. The instrumentôs reliability was evaluated through the Cronbachôs Alpha, which is based on internal consistency and widely used to verify the reliability of the construct. The pilot group targeted was 10% of the population which translates to 7 respondents. The pilot study showed a Cronbachôs Alpha value of 0.9 which revealed very high reliability. Therefore, the questionnaire was accepted for the study and the researcher proceeded to the actual data collection. The firms involved in the pilot study were excluded from the final data collection exercise.

Validity is ñthe appropriateness of measures used, accuracy of analysis and generalizability of the findingsò (Thompson, 2013). Validity concentrates on how questions in the questionnaire assist in answering the research questions. The validity of the content focuses on how the questions included in the questionnaire help in answering the research questions. In this study, the content validity employed was the measure of degree to which the data to be collected using the instrument represent the content under study. The procedure involved the consultations with engineers and procurement professionals in design of questionnaire.

3.7 Ethical issues in consideration

High ethical standards were observed throughout the study. As part of the research, IRB clearance was sought and received. Firstly, confidentiality and anonymity of the respondents participating in the study was upheld. Secondly, voluntary participation and informed consent of respondents was sought at all times. Finally, the study did not disclose the sensitive data so as not to compromise or distort the study.

CHAPTER FOUR: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the analysis and results of the data collected. The finding are presented are from the data collected from the engineering consulting firms through the administered questionnaires. The section starts by presenting the demographic information of the respondents, followed by the results and findings as result of the descriptive and inferential analysis. In the last section, information from the interviews with the Senior Managers in the Procurement departments of each of the Road Authorities presented. This is supported with information from review of road authoritiesô procurement policy documents, manuals and Standard Request for Proposals documents.

4.2 Road Authorities Public Procurement Practices

In this section, the study sought to establish the public procurement practices applied by road authorities in procuring of engineering consulting services. The areas of focus were the public procurement procedures applied, the determination of evaluation criteria and its effectiveness and their perceptions and opinions on the public procurement practices.

4.2.1 Public Procurement Procedures

On the types of procurement methods used, the procurement managers interviewed reported that predominant method used is open tendering. The other methods such as restricted tendering or direct procurement are only seldom used as it has more stringent terms of conditions that have to be fulfilled. The open tendering is opted as it promotes effective competition, offers and equal opportunity for an organization or firm to participate and the road authorities enjoy value for money due to lower prices

The procurement managers confirmed that the notices for Request for Expressions of Interest and Request for Proposals for consultancy assignments are placed in newspapers of nationwide circulation, on the road authoritiesô websites and on the government procurement website commonly known as IFMIS. This is to ensure that prospective bidders have options to access the opportunities. The tender documents can be downloaded from the websites for free or collected from the road authoritiesô offices however, for this option a nominal fee involved.

The interviewees reported that the predominant method of selecting appropriate consultant is the quality and cost based selection (QCBS) method. The other methods used Quality based selection (QBS) and Fixed budget selection (FBS). The QCBS method is usually used because most of the assignments by the road authorities are considered appropriate for this method and are considered fairly standard. This is because the assignment the type of service required is common and not complex; the scope can be defined precisely; staff time, duration of assignment and other costs can be reasonably estimated, the risk is quantifiable and manageable. In the packaging of the assignment, the procurement managers reported that this is determined together with the road engineers and the procurement department. The main considerations are the type of work, the expertise required, the kind of solutions required, and the road authoritiesô arrangements either with national government or donors.

On the measures that can be applied to improve access to the various road authoritiesô opportunities, the interviewees mentioned that it would require efforts from sides, consulting firms and the road authorities. For the consultants, the interviewees reported that there is need for the firms to be proactive in terms of identifying opportunities, this means checking the various platforms that the authorities use to publish opportunities i.e. newspapers, road authority website and IFMIS website. They also mentioned that there is need for the firms to thoroughly interrogate the tender documents so as to identify the exact requirements and comply with them. They complained that during the bidding process they found that most of the local firms were making silly mistakes for example using wrong assignment names, no signatures on official documents, omitting documents such as education certificates for key experts or tax compliance certificate that will lead to automatic disqualification. From the road authorities perspective, there is need to carry out sensitization workshops for the consultants same as they do for local contractors so as to empower them, set aside certain assignments for local consultants, introduce a form of local content policy that enhances consulting firm access to the opportunities in the road authorities and organize training for the firms on how to prepare responsive proposals.

4.2.2 Evaluation Criteria

The procurement managers interviewed confirmed that the evaluation and selection criteria are always outlined in detail in all bidding documents. The evaluation and selection criteria determined are based on past experience from previous assignments handled by the

road authorities. They have been able to build a database of requirements and performance and thereby able to come up with appropriate criteria. The nature, size, type and complexity of project and assignment will determine the type and level of expertise, experience and number of experts. In addition, there are preferences and circumstances that have to be considered. This can be influenced by government policy or even project sponsors especially the donor bank conditions.

In their opinion, the procurement managers believe that the current evaluation and selection criteria encourage participation of local engineering consulting firms. The reasons given included that the criteria used is objective as the attributes are measurable and unbiased; it allows the firms to target projects that match their experience and capacity enabling them to marshal the required resources and it rewards excellence at the same time discourages cost cutting for the focus is on quality, competence and experience.

The procurement managers agreed that there are area that are not considered in the evaluation, that is not enough focus is given and believe that the inclusion would be to the advantage of the local consulting firms. the areas include; awarding proposal of innovative and sustainable solutions, preference for local content as it involves taking into account emerging societal issues, training and capacity building efforts; and lastly the life cycle optimization (value for money solutions) proposal that encourage efficient and sustainable use of locally available resources.

4.3 Response Rate

From the 60 questionnaires that were administered 46 of them were returned for analysis representing an overall response rate of 76.7% as shown in Table 4-1. According to Babbie (2004) return rates of 50% are considered acceptable to be analysed and published, where 60 was considered good and 70% very good. From this assertion, a response rate of 76.6% is adequate for the study. The questionnaires were duly completed by senior managers in the engineering consulting firms.

Table 4-1: *Distribution of the Respondents by Responses Rate*

Response Rate	**Frequency (F)**	**Percentage (%)**
Returned	46	76.7
Not Returned	14	23.3
Issued	**60**	**100.0**

4.4 Background Information of the Engineering Firm

This section analyses the characteristics of the engineering firm. This aimed at enhancing the understanding of the background information of the respondents and their personal ability to provide relevant data sought for under this study. The resources and capabilities of a firm impacts the likelihood of it succeeding in a public procurement process and thereby win contracts and establish new revenue streams. In this regards, the study sought to establish the how the firms are incorporated, the firmôs registration status with EBK, number of registered engineers and their annual turnover. The results are shown in Table 4-2.

Table 4-2: *Background Information of the Engineering Firm*

Firm Background			**Registered with EBK**		
	Frequency	**%**		**Frequency**	**%**
Local	39	84.8	Yes	43	93.5
Foreign	6	13.0	No	2	4.3
No response	1	2.2	No response	1	2.2
Total	46	100	Total	46	100
Number of Engineers Employed			**Annual Turnover**		
	Frequency	**%**		**Frequency**	**%**
<10	15	32.6	< 25 million	2	4.3
10 - <25	17	37.0	25 < 50 million	19	41.3
25 - < 50	11	23.9	50 - < 100 million	13	28.3
>50	3	6.5	> 100 million	12	26.1
Total	46	100	Total	46	100

The findings found that the most of the engineering consultancy firms which responded are incorporated locally at 84.8% while 13.0% are foreign firms. As regards with

their registration status with the Engineering Board of Kenya (EBK) this has a bearing on their compliance and thus ability to provide engineering services. Findings showed that 93.5% of the firms that responded indicated that they were registered with EBK whereas 4.3% were not registered. This implies that most of these firms were eligible to be considered for the engineering works as stipulated by law.

To have an indication of the capacity of the engineering consulting firms, the study sought to find out the number of registered engineers employed in the firm. This outlines the firmsô resource base. The findings showed that most of the firms have employed less than fifty (50) registered engineers with most at 37% having between 10 and 25 engineers and 32.6% had less than 10 engineers in their firm. The number of engineers a firm has offers a significant bearing on the ability to compete efficiently and effectively for the public procurement opportunities.

The study also sought to find out the firmôs approximate annual turnover in the last 3 years. The findings indicate that majority, 41.8% of the respondents had an annual turnover of between KShs 25 million and KShs 50 million, while 28.3% had annual turnover of between KShs. 50 million and KShs 100 million, 26.1% had over turnover of over KShs 100 million and, 4.3% reported a turnover of less than KShs 25 million. This implies that most of these engineering firms can improve their turnover by participating in public procurement opportunities.

4.5 Firm Level of Participation in Consultancy Services Tenders

The second section was included so as to determine the firm level of activity in public procurement. All the respondent firms indicated they have participated in the tender process for provision of consultancy services for the road authorities. This implies that the firms have knowledge and experience of the public procurement process due to this kind of interaction. As part of the study, there was need to determine the firmsô level of participation in consultancy services tenders to ascertain their experience and knowledgeable of the public procurement process for engineering consultancy services.

In gauging the level of the participation, firms were asked to indicate the number of tenders they have submitted in the last 5 years. From the survey results as shown in Figure 4-1, majority of the firms, 19 (41.3%), indicated that they had submitted between 25 to 50 tenders in the last 5 years, whereas 14 firms (30.4%) had submitted more than 50 tenders.

The rest of the firms, 13 (28.3%), submitted less than 25 tenders in the last 5 years. The responses show that the firms are fairly active in the public procurement process. This kind of engagement by the firms indicates that all the respondents are in a position to gauge the public procurement procedures due to their experience.

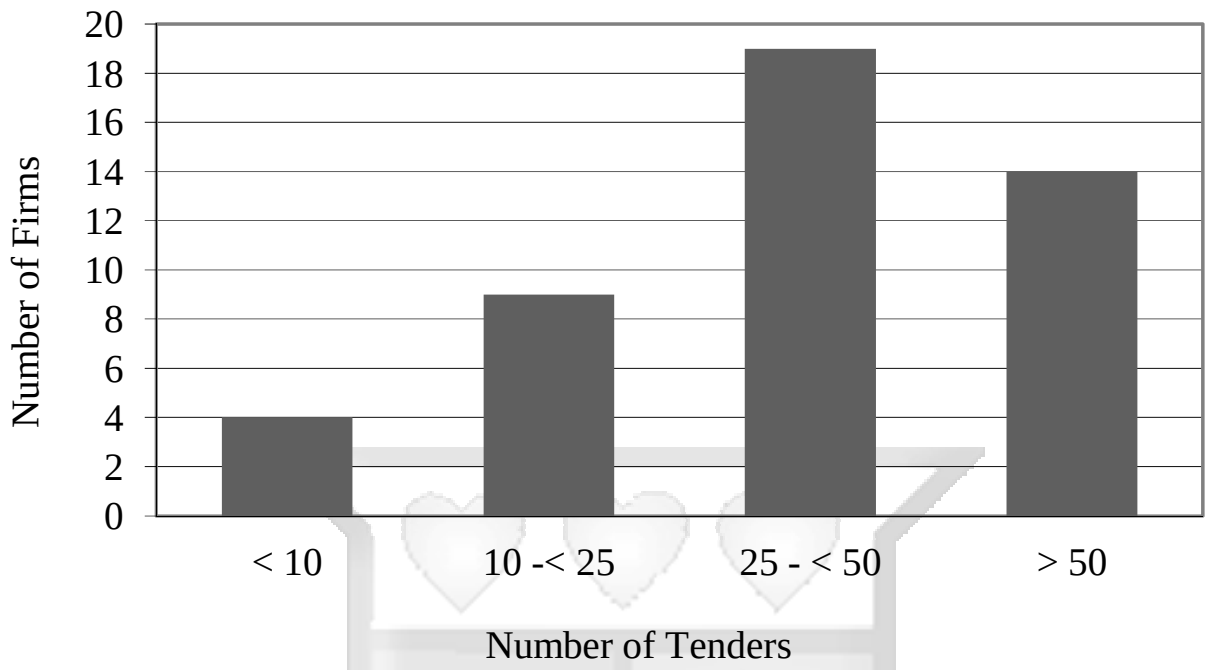

Figure 4-1: Number of tenders in the last 5 years

In regards to the success of the firms in winning the tenders, findings as shown in Figure 4-2 show that 20 firms (43.5%) had a success rate of less than 10% whereas 14 (30.4%) indicated to have had a success rate of between 10-<25%. This shows that majority of the firms are struggling to compete for and win business with road agencies. Only 12 firms indicated to have a success rate of more than 25%.

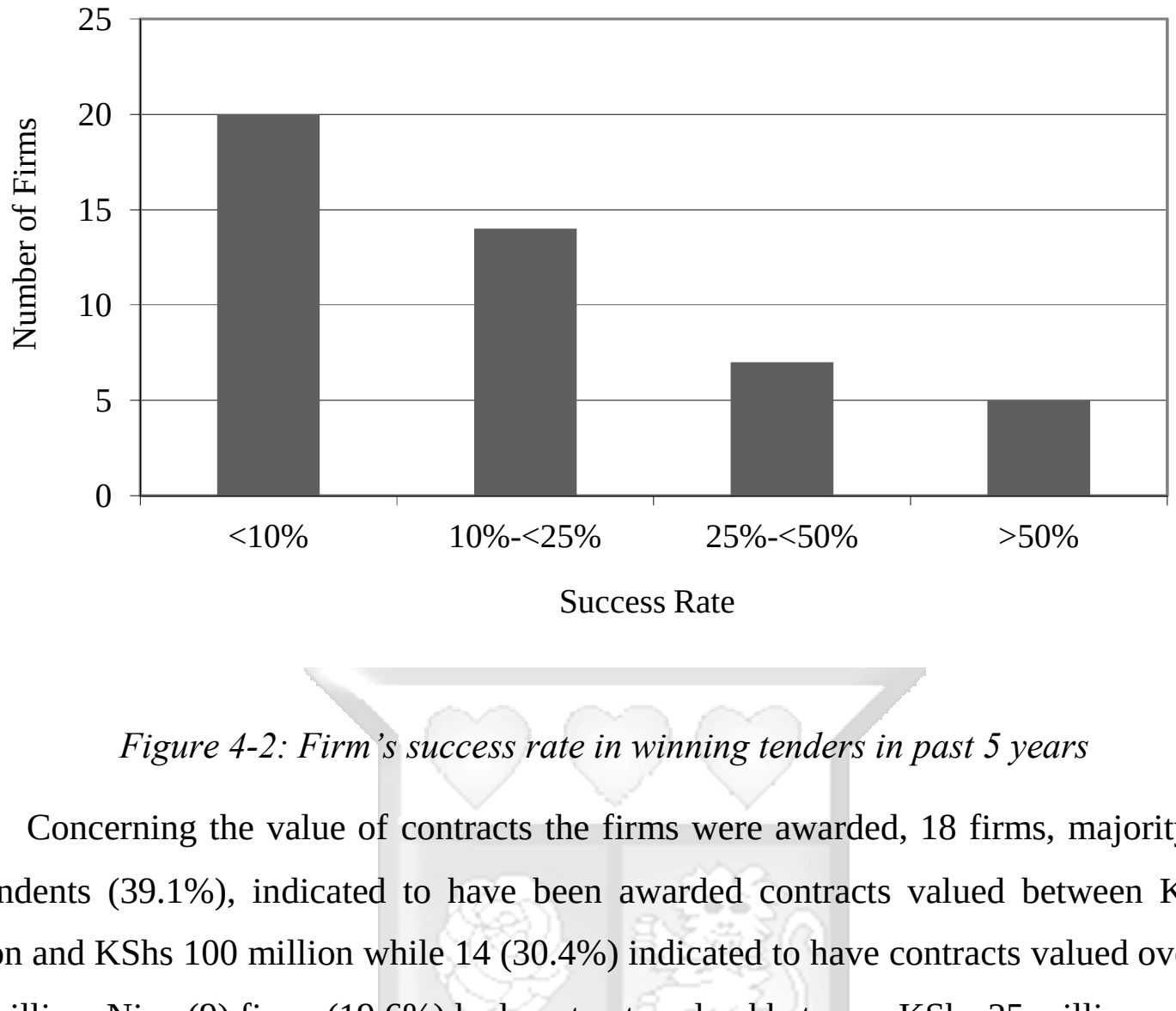

Figure 4-2: Firm's success rate in winning tenders in past 5 years

Concerning the value of contracts the firms were awarded, 18 firms, majority of the respondents (39.1%), indicated to have been awarded contracts valued between KShs 50 million and KShs 100 million while 14 (30.4%) indicated to have contracts valued over KShs 100 million. Nine (9) firms (19.6%) had contracts valued between KShs 25 million and KShs 50 million and 5 (10.9%) indicated to have contracts valued at KShs 25 million. The findings are summarised in Figure 4-3.

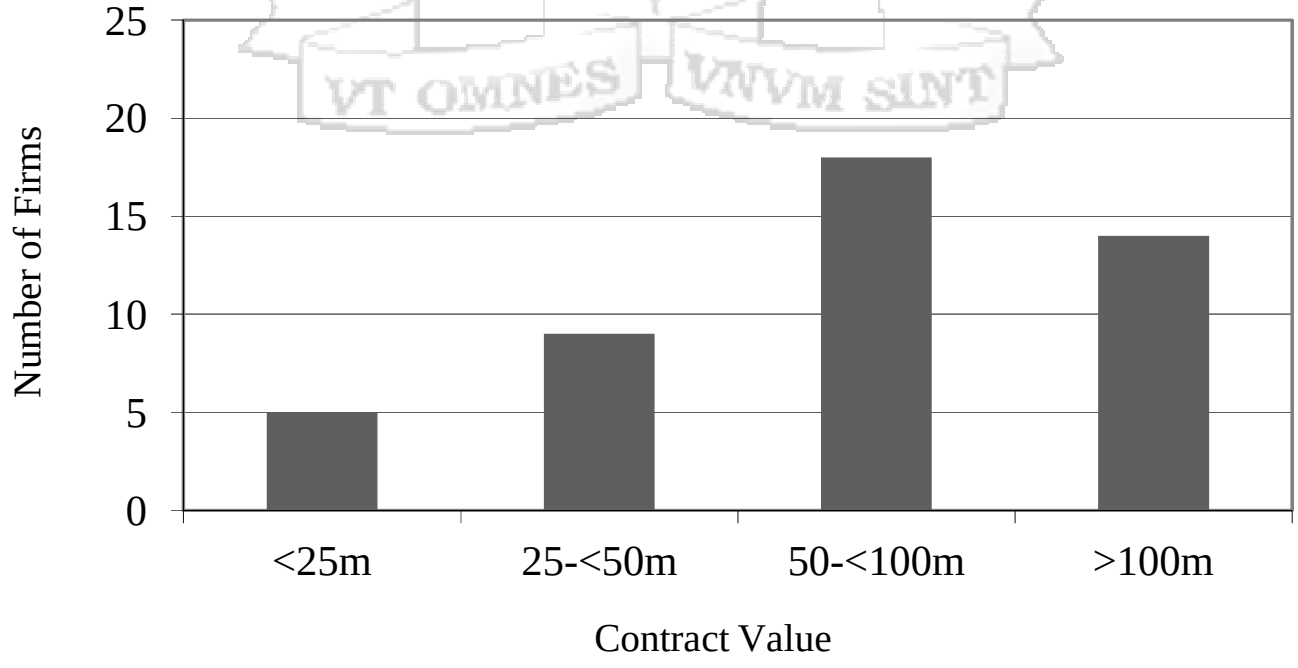

Figure 4-3: Total value of contracts awarded to the firm in last 5 years (approximate value)

The findings here are in line with findings from a study conducted in Nigeria that showed that SMEs low success rates in public procurement are due factors such as lack of skills to prepare responsive tenders, insufficient knowledge of the procurement process, little time to prepare bids, bias against new suppliers, preference for large enterprises, and corrupt practices (Akenroye & Aju, 2013b). Some of these factors were also confirmed by procurement managers in the road authorities who indicated the major weaknesses that is detrimental to the local engineering firms has been submission of unresponsive bid because the firms do comply with the submission requirements and thereby they get disqualified. The attribute this to their lack of knowledge in the procurement procedures, inexperience in preparing tenders and last minute rush.

The findings also revealed that the opportunities available are of high value and thereby provide very lucrative opportunities to the firms. Hence the need for the engineering consulting firms to improve their competitiveness so as to access these opportunities and grow their business.

4.6 Perceptions of the Public Procurement Practices

The first research objective was to determine the perceptions of the public procurement practices by the engineering consulting firms. The respondents were presented with statements based on the variables under study. The statements were on a scale of 1 to 5 where 1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree and 5 - Strongly Agree. The descriptive analysis per variable is presented in Table 4-3.

Table 4-3: *Engineering Consulting Firms Perceptions of the Public Procurement Practices*

	1 %	**2 %**	**3 %**	**4 %**	**5 %**	**Mean**	**Std. Deviation**
Procurement method usually used by the road agencies is appropriate	0	8.7	15.2	54.3	21.7	**3.89**	0.849
Firms have access to timely information on opportunities	0	8.7	6.5	56.5	28.3	**4.04**	0.842
Tender documents are clear, well prepared and easy to understand and enough time allowed to prepare proposal	0	17.4	19.6	37.0	26.1	**3.72**	1.047
Packaging of contract is too large relative to size of the firm	0	17.4	15.2	45.7	21.7	**3.72**	1.004
The bid security requirement is reasonable	0	0	15.2	63	21.7	**4.07**	0.611
The payment principle usually adopted by the procuring agency is acceptable e.g. time based, lump sum etc.	8.7	8.7	13	47.8	21.7	**3.65**	1.178
The estimated duration of the assignment is usually adequate	0	26.1	8.7	28.3	37	**3.76**	1.214
Contract awarding method usually used by the road agencies e.g. least cost bidder or QCBS, QBS etc. is appropriate	0	6.5	21.7	23.9	30.4	**3.95**	0.985
The procuring agencies personnel are easily available, offer timely clarifications; organize pre-tender site visits and they are adequate to prepare a good proposal	8.7	8.7	23.9	37	21.7	**3.54**	1.187
The tender evaluation is conducted in an objective and fair manner	17.4	8.7	15.2	28.3	30.4	**3.46**	1.456
The procuring agency communicate the award of tender to the successful tenderer in a timely manner	0	39.1	13	8.7	39.1	**3.48**	1.362
The procuring agency communicate to unsuccessful tenderers the reason for rejection	37	47.8	2.2	6.5	6.5	**1.98**	1.125
The payments for work done is timely	43.5	19.6	21.7	8.7	6.5	**2.15**	1.264

The findings indicate that majority of the respondents agreed with the following statements concerning the public procurement procedures. 54.3% of the respondents agreed that the procurement method usually used by the road agencies is appropriate, 56.5% agreed that they have access to timely information on opportunities, 63.0% agreed that the bid security requirement is reasonable, 47.8% agreed that the payment principle usually adopted

by the procuring agency is acceptable e.g. time based, lump sum etc., 45.0% agreed that packaging of contract is too large relative to size of the firm.

For some of the statements the responses there were mixed reactions. 26.1% disagreed whereas 28.3% agreed and 37% strongly agreed with the statement that the estimated duration of the assignment is usually adequate. In regards to the contract awarding method usually adopted by the road authorities, 21.7% neither agree nor disagree, 23.9% agree and 30.4% strongly agree, agreed with the statement. On the statement concerning the availability of agency personnel and their organization in terms of offering timely clarifications, organization of pre-tender visits adequately to ensure preparation of good proposal, results showed that 37% agree and 21.7% strongly agreed and 23.9% of respondents neither agreed nor disagreed. These mixed reactions to these statements indicate that the experience of the firms on various aspects on public procurement process may be as a result of their experience in the procurement process.

The findings also revealed that 47.8% of the respondents disagreed with the statements that the procuring agency communicate to unsuccessful tenderers the reason for rejection, 39.1% with the statements that the procuring agency communicate the award of tender to the successful tenderer in a timely manner, and 43.5% with the statement that the payments for work done is timely.

In order to get more insight in the respondentsô responses, the study also sought the respondents view on the whether the public procurement procedures for consultancy services by the road agencies have an impact on the firmôs competitiveness and all the respondents indicated their agreement. They were in general agreement that the public sector opportunities are very attractive and offer the firms opportunities to grow and develop their firms however, they are often discouraged from participating. Explanations provided include bias in the awarding of contracts, with most of opportunities awarded to the ñusualò firms, the assignments were too big for the firms, delayed payments, lack of communication of reason in case of unsuccessful bids.

The respondentsô opinion on what aspect of the public procurement procedures should be improved or change so as to have a positive impact of engineering firmôs competitiveness was also sought. Some of the ideas given include: Small projects should be packaged for small firms of consultants so that the competition is fair; the agencies should emphasize on

local content and make sure foreign contractors and consultancies partner with local partners; award tenders to deserving bidders; be free and fair during the evaluation process; preference of bids should be given adequate time; bid evaluation should be done timely.

4.7 Perceptions of the Evaluation Criteria

The second research objective was to determine the perceptions of the engineering consulting firms in regards to the evaluation criteria used in the awarding of contracts. The respondents were presented with statements based on the variables under study. The statements were on a scale of 1 to 5 where 1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree and 5 - Strongly Agree. The descriptive analysis per variable is presented in Table 4-4.

Table 4-4: *Rating of Respondents' perceptions on the evaluation/selection criteria*

	1 %	2 %	3 %	4 %	5 %	Mean	Std. Deviation
The evaluation criteria normally used by the road agencies is reasonable	17.4	21.7	17.4	21.7	21.7	**3.09**	1.427
The weightings normally used by the road agencies is appropriate	8.7	0.0	39.1	34.8	17.4	**3.52**	1.070
The qualification criteria in terms of years of firmôs experience and the firmôs project experience value is reasonable	0.0	8.7	0.0	73.9	17.4	**4.00**	0.730
The qualification criteria in terms of staff requirements is reasonable	0.0	17.4	6.5	43.5	32.6	**3.91**	1.050
The sources of information required during the submission of the proposals is reasonable e.g. client references, evidence of previous experience, CVs	0.0	0.0	0.0	76.1	23.9	**4.24**	0.431
Innovative and sustainability solutions are rewarded to a larger extent in selection of consultant	17.4	0.0	30.4	37.0	15.2	**3.33**	1.266
Consultant competence is decisive and is rewarded to a larger extent in the selection of consultant	17.4	17.4	19.6	28.3	17.4	**3.11**	1.370

From the findings, majority of the respondents agreed that; the qualification criteria in terms of years of firmôs experience and the firmôs project experience value is reasonable; The qualification criteria in terms of staff requirements is reasonable; and the sources of information required during the submission of the proposals is reasonable e.g. client references, evidence of previous experience, CVs. This finding is in line previous research

within construction industry on criteria for selection of architectural and engineering service providers. The studies showed that some of the evaluation criteria are information sources more frequently used and expected, these include previous experience of firms (West, 1997;Corcoran & McLean, 1998); and experience and qualifications of key staff (Dawes, Dowling, & Patterson, 1993). In regards to sources of information, they include client recommendations (West, 1997) and personal contact with the consultant (Dawes et al., 1993).

Further, the findings indicated that 76.1% agreed with the statements that they found the sources of information required during the submission of the proposals as reasonable e.g. client references, evidence of previous experience, CVs. However, the level of agreement is much lower for statement on the reasonability of the qualification criteria in terms of staff requirements which was at 43.5% and Innovative and sustainability solutions are rewarded to a larger extent in selection of consultant which was at 37.0%. However, most of the respondents, 39.1%, neither agree nor disagree with the statement that the weightings normally used by the road agencies are appropriate.

For some of the statements, though most of the respondents agreed with the statements, the responses were mixed. These statements on innovative and sustainability solutions are rewarded to a larger extent in selection of consultant 17.4% disagreed and 30.4% neither agrees nor disagrees, where 37.0% and 15.2% agreed and strongly agree respectively. The statement on consultant competence is decisive and is rewarded to a larger extent in the selection of consultant, 17.4% strongly disagree, 17.4 % disagreed, 19.6% neither agree nor disagree whereas 28.3% and 17.4% agree and strongly agree respectively.

In addition to seeking the respondentsô perceptions, the study sought to find out what aspect of the evaluation criteria influences the engineering firmôs competitiveness. The answers given included past experience and previous projects worked on, qualification and experience of the staff for the project; failing at the technical stage without any reason given to the firm; and biased evaluation and selection criteria.

The view of the respondents on if the evaluation criteria for consultancy services by the road agencies have a positive impact on the firmôs competitiveness was sought out. The findings showed that majority of the respondents (74.0%) agreed that the evaluation for consultancy services by the road agencies had an impact on the firmôs competitiveness while 26.0% disagreed. The explanations given indicated that the firms would be discouraged to

participate in the procurement process due to reasons such as the failure to be given the proper reasons for been unsuccessful in a bid demoralizes the bidder; inability to verify the awarded marks and criterion used, the focus on price affecting the weightings making it difficult to compete with the undercutting, lack of consideration for technological superiority and innovation, and bias towards existing service providers in awarding of contracts .

4.8 Perceptions of the Public Procurement Agencies Behaviour and Actions

The third research objective was to determine perceptions of the engineering consulting firms in regards to public procurement agencies performance, that is in regards to their behaviour and actions. The respondents were requested to indicate their level of agreement with the following statements relating to the public procurement agencies behaviour and actions. The statements were on a scale of 1 to 5 where 1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree and 5 - Strongly Agree. The descriptive analysis per variable is presented in Table 4-5.

Table 4-5: *Perceptions of the Public Procurement Agencies Behaviour and Actions*

	1 %	2 %	3 %	4 %	5 %	Mean	Std. Deviation
Public procurement process is overly formalistic and cost focused	8.7	8.7	13	13	60.9	**3.52**	1.070
The workload throughout the year is adequate	6.5	17.4	8.7	41.3	26.1	**3.63**	1.236
Public procurement related disputes are handled in fair and timely	8.7	8.7	21.7	45.7	15.2	**3.50**	1.130
The agency personnel are knowledgeable of the process and regulations	0	8.7	8.7	58.7	23.9	**3.98**	0.830
Public procurement promote competition and ensure that competitors are treated fairly	8.7	15.2	32.6	19.6	15.2	**3.19**	1.194
Public procurement facilitates the promotion of local industry and economic development	8.7	23.9	21.7	28.3	17.4	**3.22**	1.246
Public procurement system is characterized by corrupt practices	0	0	39.1	26.1	34.8	**3.96**	0.868

The findings indicate that majority of the respondents agreed that public procurement process is overly formalistic and cost focused; the agency personnel are knowledgeable of the process and regulations; the workload throughout the year is adequate; public procurement

related disputes are handled in fair and timely; and public procurement system is characterized by corrupt practices.

However, in regards to statements on public procurement promote competition and ensure that competitors are treated fairly and public procurement facilitates the promotion of local industry and economic development, majority of the respondents were not in agreement.28.3% of the respondents disagreed with the statement that Public procurement facilitates the promotion of local industry and economic development as a statement regarding aspects of public procurement Performance by the road agencies. 32.6% of the respondents neither agree nor disagree with the statement that Public procurement promotes competition and ensure that competitors are treated fairly and 39.1% neither agree nor disagree with the statement that the public procurement system is characterized by corrupt practices.

In an effort to get more insight, the study sought the respondentsô view on public procurement performance impact on the firmôs competitiveness in procurement and the findings indicated that majority (98.0%) of the respondents agreed that the public procurement performance, their behaviour and actions, by the road authorities had an impact on the firmôs competitiveness while only 2.0% disagreed. The explanations given were that the behavior and actions of the procurement authorities influences the decision in determining participation in the public procurement. They consider public procurement system should be reliable in terms of workload, have simple and easily understandable procurement processes, fair and timely. This stimulates and encourages participation. An ineffective procurement system is characteristic uncoordinated activities, high and unnecessary costs, and delayed implementation thereby leading to the submission of inflated tenders containing a ñrisk premiumò, opening the system to corrupt practices that lead to unfair competition due to unscrupulous deal; downplaying competency and quality in the decision making process; and leads to delayed or defective performance.

The respondents were also requested to indicate what aspect of the public procurement performance should be improved or change so as to have a positive impact of engineering firmôs competitiveness. They indicated that the public procurement has become too private and is no longer an open and transparent process therefore there is need to increase the transparency and openness of the public procurement process; the delay in

payments was also another area indicated to be in need of improvement and the firms requested that the agencies can make payments as per the contract conditions.

The study sought to find out what the road agencies should do to encourage the competitiveness of local engineering firms. The responses given include: packaging large projects into small manageable projects so that the small firms can also qualify; engage banks and government to give credit to consultants once they get work and be their guarantors; timely payments to consultants - pay firms on time or within the stipulated time; require that the foreign firms partner with local firms; eliminate corrupt practices by introducing or enforcing the penalties in the public procurement act; introduce more open/fair evaluation procedures; Reduce the bidding periods for the assignments - faster procurement process.

4.9 Factor Analysis of Public Procurement Perceptions

Factor analysis was performed to observe the factor structure of the questionnaire. Since the study is exploratory, assumptions cannot be made about correlations between resulting components. Principle component analysis was applied to extract the respondentsô perceptions of public procurement. Following the initial principle component analysis, twenty seven (27) components were extracted. According to Hair, Anderson, Tatham, & Black, (1998) recommendation eigen values greater than 1 are what are considered. The results produced six (6) of the components had Eigen values > 1 and were explained 94.325% of variations in the factors as shown in Table 4-6. Further analysis using the scree plot as shown in Figure 4-4 indicated that six components need be considered.

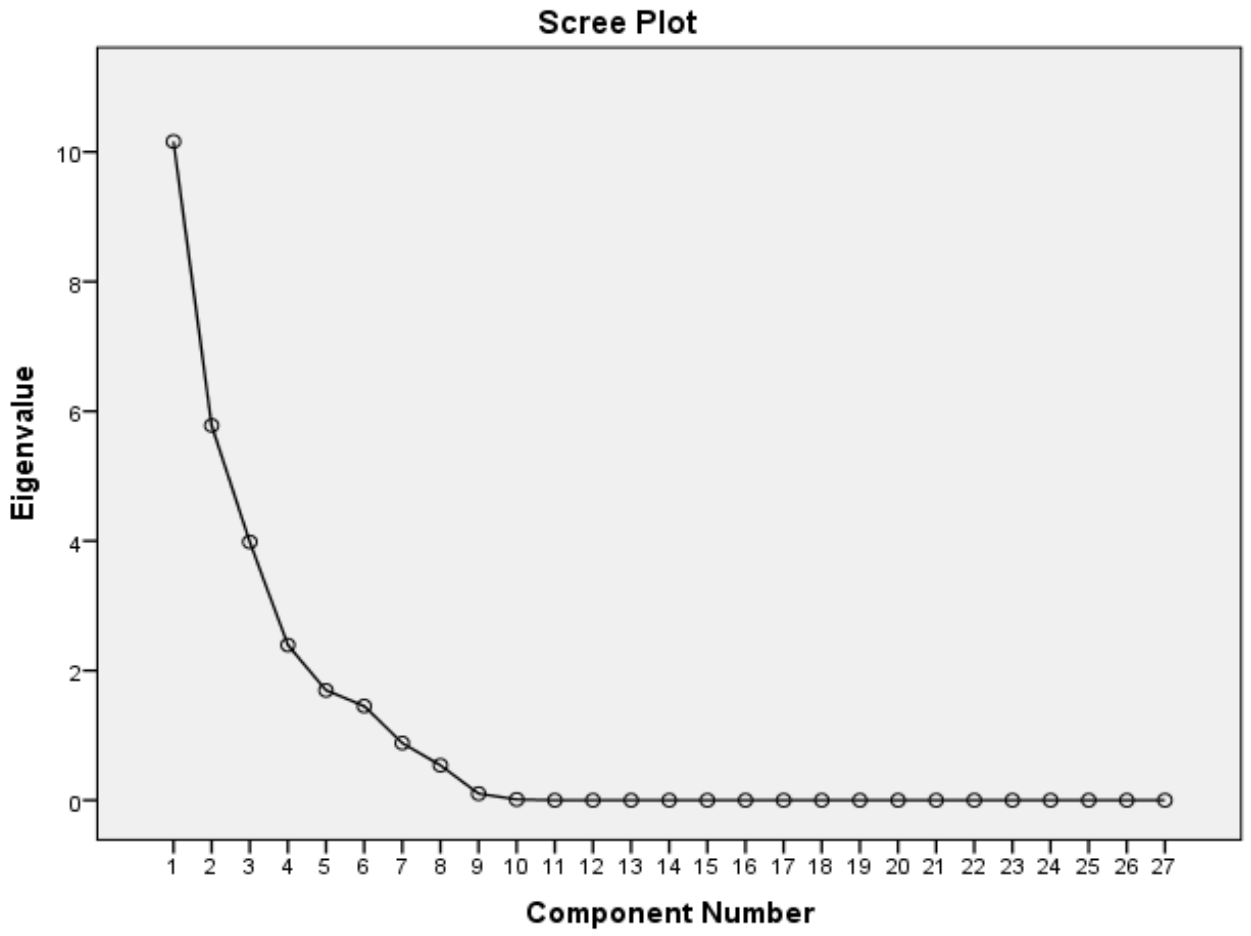

Figure 4-4: Scree Plot

Table 4-6: *Total Variance Explained*

Total Variance Explained

Component	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.161	37.632	37.632	10.161	37.632	37.632	5.650	20.926	20.926
2	5.781	21.411	59.043	5.781	21.411	59.043	5.169	19.146	40.072
3	3.985	14.759	73.802	3.985	14.759	73.802	4.578	16.957	57.029
4	2.394	8.867	82.669	2.394	8.867	82.669	3.444	12.755	69.784
5	1.695	6.277	88.946	1.695	6.277	88.946	3.389	12.552	82.336
6	1.452	5.379	94.325	1.452	5.379	94.325	3.237	11.989	94.325
7	.882	3.265	97.590						
8	.538	1.994	99.584						
9	.101	.374	99.959						
10	.011	.041	100.000						
11	1.198E-015	4.436E-015	100.000						
12	8.868E-016	3.285E-015	100.000						
13	6.409E-016	2.374E-015	100.000						
14	6.045E-016	2.239E-015	100.000						
15	4.236E-016	1.569E-015	100.000						
16	2.745E-016	1.017E-015	100.000						
17	1.699E-016	6.292E-016	100.000						
18	1.195E-016	4.426E-016	100.000						
19	-3.857E-018	-1.429E-017	100.000						
20	-7.906E-017	-2.928E-016	100.000						
21	-1.626E-016	-6.021E-016	100.000						
22	-3.477E-016	-1.288E-015	100.000						
23	-3.909E-016	-1.448E-015	100.000						
24	-4.304E-016	-1.594E-015	100.000						
25	-5.827E-016	-2.158E-015	100.000						
26	-7.835E-016	-2.902E-015	100.000						
27	-1.300E-015	-4.813E-015	100.000						

Extraction Method: Principal Component Analysis.

According to Hair et al., 1998 variables with loading greater than 0.30 be considered significant, loading greater than 0.40 more important, and loading 0.50 or greater is very significant. On the other hand, according to Field (2005) a factor is reliable if it has four or more loadings of at least 0.6 regardless of sample size. Therefore, for this study, only factor loading of 0.60 or better was considered significant for absorbing an item in its respective factors as shown in Table 4-7. Fifteen variables were dropped and the remaining variables were distributed as follows in the final solution; seven variables loaded onto component 1; four variables on component 2 and 3 each; three variables on component 4; two variables on component 5 and three variable on component 6. The researcher decided to give the component names to explain their related variables.

Table 4-7: *Perception of Public Procurement*

	Initial Eigen Value	**% of variance**	**Factor loading**
Component 1- Reasonable Requirements	**10.161**	**37.632**	
The evaluation criteria normally used by the road agencies is reasonable			0.943
Packaging of contract is too large relative to size of the firm			0.888
The bid security requirement is reasonable			0.796
The procuring agencies personnel are easily available, offer timely clarifications; organize pre-tender site visits and they are adequate to prepare a good proposal			0.767
Public procurement process is overly formalistic and cost focused			0.688
Procurement method usually used by the road agencies is appropriate			0.613
Tender documents are clear, well prepared and easy to understand and enough time allowed to prepare proposal			0.613
Component 2 – Appropriate Capability and Experience	**5.781**	**21.411**	
Consultant competence is decisive and is rewarded to a larger extent in the selection of consultant			0.921
Public procurement facilitates the promotion of local industry and economic development			0.882
The qualification criteria in terms of years of firmôs experience and the firmôs project experience value is reasonable			0.758
The procuring agency communicate to unsuccessful tenderers the reason for rejection			0.736

	Initial Eigen Value	% of variance	Factor loading
Component 3- Fair Play	**3.985**	**14.759**	
Public procurement related disputes are handled in fair and timely			0.887
Public procurement promote competition and ensure that competitors are treated fairly			0.766
Innovative and sustainability solutions are rewarded to a larger extent in selection of consultant			0.758
The workload throughout the year is adequate			0.667
Component 4 – Proper Planning	**2.394**	**0.867**	
The qualification criteria in terms of staff requirements is reasonable			0.828
The estimated duration of the assignment is usually adequate			0.792
The procuring agency communicate the award of tender to the successful tenderer in a timely manner			0.756
Component 5 – Information accessibility	**1.695**	**6.277**	
Contract awarding method usually used by the road agencies e.g. least cost bidder or QCBS, QBS etc			0.882
Firms have access to timely information on opportunities			0.859
The payment principle usually adopted by the procuring agency is acceptable e.g. time based, lump sum etc.			
Component 6 – Procurement Practices	**1.452**	**5.379**	
Public procurement system is characterized by corrupt practices			0.921
The payments for work done is timely			0.894
The weightings normally used by the road agencies is appropriate			0.735

4.10 Respondents' Perceptions of Public Procurement

The principle component analysis for the respondentsô perceptions of public procurement produced six distinct components.

Component 1- Reasonable Requirements: The component explained the bulk of the variables at over 37% of the total variance. It consists of seven variables with loading ranging from 0.943 to 0.613. The variables in this component are: the evaluation criteria normally used by the road agencies is reasonable; packaging of contract is too large relative to size of the firm; the bid security requirement is reasonable; the procuring agencies personnel are

easily available, offer timely clarifications; organize pre-tender site visits and they are adequate to prepare a good proposal; public procurement process is overly formalistic and cost focused; procurement method usually used by the road agencies is appropriate; tender documents are clear, well prepared and easy to understand and enough time allowed to prepare proposal.

Component 2 ï Appropriate Capability and Experience: The second component explains 21.4% of the total variance. It consists of four variables with loading ranging from 0.921 to 0.736. The variables in this component are: Consultant competence is decisive and is rewarded to a larger extent in the selection of consultant; Public procurement facilitates the promotion of local industry and economic development; The qualification criteria in terms of years of firmôs experience and the firmôs project experience value is reasonable; The procuring agency communicate to unsuccessful tenderers the reason for rejection.

Component 3- Fair Play: The third component explains 14.8% of the total variance. It consists of four variables with loading ranging from 0.887 to 0.667. The variables in this component are: Public procurement related disputes are handled in fair and timely; Public procurement promote competition and ensure that competitors are treated fairly; Innovative and sustainability solutions are rewarded to a larger extent in selection of consultant; The workload throughout the year is adequate.

The remaining components explain less shared variance.

Component 4 ï Proper Planning: Component four explains a total variance of 8.9%. It consists of three variables with loading ranging from 0.828 to 0.756. The variables in this component are: The qualification criteria in terms of staff requirements is reasonable; The estimated duration of the assignment is usually adequate; The procuring agency communicate the award of tender to the successful tenderer in a timely manner.

Component 5 ï Information accessibility: Component five with a total variance of 6.3% consists of two variables with loading of 0.882 and 0.859. The variables are contract awarding method usually used by the road agencies is appropriate; and firms have access to timely information on opportunities.

Component 6 ï Procurement Practices: The final component, component six explains a variance of 5.4% and consists of three variables with loading ranging from 0.921 to 0.735. The variables are public procurement system is characterized by corrupt practices; the

payments for work done is timely; the weightings normally used by the road agencies is appropriate.

CHAPTER 5: DISCUSSION OF FINDINGS

5.1 Introduction

The main objective of the study is to evaluate the perceptions of the public procurement practices by the engineering consulting firms. Overall, the study findings reveal that the country has a vibrant pool of local engineering consulting firms actively participating in provision of engineering consultancy services to the road authorities which are procured through public procurement. In addition, it was noted that all road authorities have instituted administrative systems and processes which comply with the public procurement regulations and policies.

5.2 Perceptions of the Public Procurement Practices

As part of the study, elements of the public procurement procedures were derived so as to identify what were the engineering consulting firmsô perceptions. The study showed that some of the identified elements form part of the public procurement procedures. From descriptive statistics, the majority of the respondents agreed with the following statements: the procurement method usually used by the road agencies is appropriate; access to timely information on opportunities; the bid security requirement is reasonable; the payment principle usually adopted by the procuring agency is acceptable. These statement shows that the current policies and procedures are encouraging participation in public procurement thereby contributing positively to the development and growth of the firms. However, the study also showed that the firms are facing constraints and therefore discouraged from participating in public procurement and negatively impacting on the firmsô participation. The elements identified are; packaging into large contract thereby reducing opportunities available for most the firms since some are not able to participate in such project; the procuring agency inability to communicate to unsuccessful tenderers the reason for rejection hence firms may keep repeating the same mistakes hindering their quest to grow and develop; Untimely payment for work done affecting cash flow and thereby ability to produce and proving their competency;

Existing literature, albeit more focussed on SMEs, identified the above factors and others as barriers to their access to public procurement markets thereby curtailing the growth and development of the enterprises (Akenroye & Aju, 2013b). They identified that the major

factor to be information obscurity which covers the clarity of tender documents, agency communicating award of tenders in timely manner, bidders having access to timely information on opportunities. These elements of public procurement procedures have been identified in other studies as contributors to the development and growth of the firms especially when promoted and encourage the participation in public procurement (Glover Report, 2008; Macpherson and Holt, 2007).

Also previous studies in the UK, (Glover Report, 2008); Ireland (FSB, 2004); EU (European Commission, 2010) revealed that small and medium sized businesses also complained of lack of information, large sized contracts, delayed payment; difficulties in obtaining information about contract opportunities and thereby acting as public procurement barriers to SMEs participation in public procurement. These are the same elements highlighted by the firms.

The areas within the public procurement procedures that the firms suggested should be improved so as to have a positive impact of engineering firmôs participation are; packaging into small projects suitable for the small firms to participate in; the road authorities to emphasize on local content and make sure foreign contractors and consultancies partner with local partners; award tenders to deserving bidders; be free and fair during the evaluation process; preparation of bids should be given adequate time; bid evaluation should be done timely. As revealed in study in Nigeria, the incorporation of the above will enable prospective bidders to discern their fitness for a contract opportunity (Akenroye & Aju, 2013a).

5.3 Perceptions of Evaluation Criteria

The second research objective was to determine the perceptions of the engineering consulting firms in regards to the evaluation criteria used in the awarding of contracts. In the procurement of engineering services, getting the right consultant is of great importance in construction projects. The consultantôs competence, commitment and attitude have an influence of the quality and cost of the project. In line with this, clients have to specify the criteria to be assessed for both the firms and individual, so as to select the preferred provider(Sporrong, 2011).

As reported by the Road Authoritiesô Procurement Managers and confirmed upon perusal of the sample bidding documents, the Request for Proposals (RFP), the bid evaluation

criteria are included in all bidding documents. The evaluation is usually carried out in three stages namely preliminary responsiveness, technical and then financial.

For the preliminary responsiveness stage, the key parameters to be assessed are more aligned to compliance and they are firm registration status with EBK, company incorporation, and tax compliance. The technical and financial evaluation criteria are outlined in the RFP. The RFP document includes the criteria, sub-criteria, and point systems for the evaluation of the technical proposal and the minimum score required so as to be eligible for the financial stage evaluation. Also included is the formula for evaluating financial proposal to determine the financial score, and finally, the weighting to be given to the technical and financial scores so as to determine the total score of each proposal and therefore determine the consultant with the highest combined score to be invited for negotiations. This procedure is applicable when the Quality and Cost based Selection (QCBS) method is used as the method for evaluation. Others can be Fixed Budget selection (FBS) or Quality Based Selection (QBS). From the perusal of assignments contracted by the road authorities, QCBS is the most common method used in the selection of consultants.

The aspects evaluated in the technical evaluation stage are firmsô past experience, firmsô proposed key expertsô qualifications and competence, proposed methodology and work plan in responding to the terms of reference. In addition, the firms have to provide proof to support the firms and individual claims of experience and capability. Due to the stringent public procurement regulations, the interaction between consultant and clients is restricted and due to the inability of client to confirm the consultantsô claims of experience and capability, the clients end up requiring submission of supporting documentation from sources and according to some respondents, this usually ends up been excessive and thereby discouraging their participation in the public procurement.

The study revealed that the respondents were in agreement with the statements on reasonability qualification requirement criteria for firms and for the staff i.e. proposed key experts qualifications and competence requirements and the required sources of information. From the perusal of the various RFP documents the requirements are fairly standard and also common across most documents with little variation observed. This can also be attributed to the importance and need to have highly competent and qualified firms and personnel carrying out the work. According to FIDIC QBS Guide 2011, there is overwhelming evidence that, selecting the services of a Consultant, Clients should be guided by one primary consideration;

the qualifications and capability of the firm or individual to meet the specific objectives in the project to be undertaken. The critical attributes considered are experience, expertise, past performance, commitment to clientôs objectives and rapport. Sporrong (2011), in his research, also confirmed that these requirements: firmôs previous experience and past performance (reputation) and, expert qualification and competence are indeed frequently used in the selection of engineering service providers.

However, it seems that the respondents had concerns with the statements associated with the evaluation process. It was observed that for statements on evaluation criteria used, weightings, rewarding for innovation and sustainability and importance of consultant competence and its reward, as their responses were mixed. In their response, they cited the lack of transparency in the awarding of points, they could not tell how the points were allocated as they did not get the ñmarking schemeò it was considered very subjective; appropriate consideration is not given for local firms, principles of sustainable design and innovation do not get appropriate consideration; and there is general feeling that the road authorities have preference for foreign and large firms especially for certain kind of assignments. On weighting, some firms believe that the inclusion of price (financial proposal) no matter the weighting, elevates its importance despite its objective and therefore find that the firms continually compete on price especially considering that the technical criteria have become fairly standardized and therefore they are unable to allow for adequate development and resourcing of their firms. This curtails the growth and development of the firms.

5.4 Public Procurement Performance

The third research objective was to determine perceptions of the engineering consulting firms in regards to public procurement agencies performance, that is in regards to their behaviour and actions. Public procurement performance is concerned with evaluating the how the road authoritiesô adherence or non-adherence to the set processes and procedures impact on the participation in public procurement of engineering consultancy firms.

The study found that majority of the respondents agreed with the following statements; the workload throughout the year is adequate, this means that there is plenty of opportunities for the firms; public procurement related dispute are handled in fair and timely manner implying that the dispute mechanism present promotes fairness and accountability;

and finally the agency personnel are knowledgeable of the process and regulations increasing the confidence for participation as they know what they are doing and the possibility of cancellation or project taking off is drastically low. This implies that the engineering firms have great confidence with these elements of road authoritiesô procurement process.

However, the respondent overwhelming agreed that the public procurement system is characterised by corrupt practices. Upon further probe, the respondents indicated this perception is as a result of finding the system too closed, lack of transparency and openness. They also cited delayed payments which implied the need to bribe so as to get paid for work done. This negative perception discourages the participation of the firms and acts as a barrier to the development. Firms opt to forego genuine opportunities as they might incur costs or soil their reputation. The integrity of procurement is threatened by corrupt practices. Transparency, accountability and integrity is the central for efficient public procurement practice so as to gain participants confidence in the procurement system (Akenroye & Aju, 2013a).

Another aspect that respondent agrees with was that the public procurement process was overly formalistic and cost focused. It has been reported that public procurements shut out SMEs with time-consuming documentation and bureaucratic processes (Glover, 2008). Therefore respondents requested that the process be simplified to encourage participation.

CHAPTER 6: CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The study showed that the local engineering consulting firms have employed less than 25 registered engineers with annual turnover of between KShs 25 million and KShs 50 million. Most of the firms have tendered between 25 to 50 tenders in the last 5 years but their success rate has been less than 10%. Most of the assignments awarded to the consultants are value between KShs. 50 million and KShs. 100 million.

The road authorities are the major buyer of engineering consultancy services for the road construction and therefore their behaviour affects the development and growth of engineering consulting firms and thereby impacts on their participation in public procurement.

The first objective was to determine the perceptions of the public procurement practices by the engineering consulting firms. The study established there are favourable public procurement framework and policies in place and they have encouraged the participation of the local engineering consulting firms in the public procurement process. The positive measures that were revealed were: the easy accessibility of information of opportunities available; favourable bid security requirements and the use of open bidding method. However, with a reported success rate of less than 10% by most firms, quite low, shows that there are various aspects of the public procurement procedures that need to be worked on. The study revealed that there are key aspects that are hindering the growth and development of local engineering firms by discouraging them from participating in public procurement. The findings have a practical implication for public procurement policy and local engineering consulting firmsô development in Kenya. Some of these aspects that need to be tackled are: restructuring of assignments into smaller lots that the firms can participate in, Restructuring the procurement process and ensuring reduction in communication gap between the road authorities and the firms, reassessment of contract awarding methods to reward excellence and discourage undercutting by cost cutting; ensuring timely payments so firms can avoid liquidity problems; and the preparation of clear, concise and easy to understand tender documents.

In regards to the second objective on perceptions of the evaluation criteria, majority of firms were in agreement that the qualification criteria, both for the firms and the experts/staff,

to be evaluated were reasonable. This is can be attributed to the general understanding that the selection of firms/consultant to provide services, the project owners should be guided by the qualifications and capability of the firm to meet the project objectives. It implies that they find that the attributes stated match the project. However, the study also revealed that the major hindrance for the firmsô participation was the evaluation process especially in the point awarding system. The perception was that the process lacked transparency and openness. The award criteria was also found not to take into consideration factors that may be favourable to local engineering firms such as criteria for local firms, and providing for innovative and sustainable solutions. Without transparency, open competition cannot prevail, corrupt dealings can proliferate, and other failings in the procurement process may be covered up, so weakening accountability. The awarding of points should be clear on how it is done. Therefore, it is critical the proposal are evaluated based on the quality of the team, methodology, match of qualifications to scope, local firms, the inclusion of for innovative and sustainable solutions, and other potential award criteria that promotes the local participation. The Client can then use a point system to score the various proposals based upon the quality of response to the various qualifications. The Client then selects its preferred Consultant based upon the total quality score.

The third research objective was to determine perceptions of the engineering consulting firms in regards to public procurement agencies performance, that is in regards to their behaviour and actions. The public procurement performance is aligned to the behaviour and action of the agencies, the buyers, in the procurement process. Most of the respondents did agree that it impacts on their participation in public procurement. The firms agreed that the workload is adequate, procurement disputes are handled in fair and timely and the personnel are knowledgeable of the process and regulations. However, the findings showed that the most firms found the process overly formalistic making the process tedious and costly especially for the small firms, the procurement process did not promote competition and did not facilitate the promotion of local industry and economic development and finally it characterized by corrupt practices. These findings indicated that these behaviours and actions do not inspire confidence on the firms. These perceptions of the road authoritiesô poor performance discourage the participation of the firms in the procurement process.

6.2 Recommendations

The local engineering firms are facing challenges from large firms, the buyers of their services and also amongst themselves. Some of the challenges are high competition from large firms and from other local firms, large contract sizes, stringent selection criteria, poorly implemented public procurement procedures, inadequate polices and regulations and the absence of strong client consultant interaction. Greater transparency can improve access to public procurement opportunities and this is through disclosure, publication and dissemination of information on available tenders. This form of disclosure can give firms access to contracts that otherwise would have been reserved for better connected, but potentially less competitive bidders. In addition, standardisation of rules governing procurement procedures and improving instructions and document formats are also other transparency initiatives needed to be included. This is all because of the benefits in form of time and costs saving. Moreover, it also gives SMEs the leverage to substantiate potential grievances.

These future initiatives will make public contracts more attractive to the local engineering firms. These include the implementation of a stronger legal framework that enhances transparency and local firmsô ability to compete for contracts effectively. The following proposed initiatives should be considered for adoption by the public procurement authorities hereby promoting the development of the local firms.

i. The authorities should streamline the procurement process minimizing the potential upfront cost related factors that tend to limit the ability of the local firms to participate in procurement process. This will significantly support the local firms that often have limited administrative capabilities, characteristic of small and medium enterprises. This includes the waiving fees incurred in the complying with registration requirement, limiting documentation needs especially for small sized contracts, and the reduction of long bid qualification, evaluation and award procedures.

ii. There is also need have clear public selection criteria matched by final decisions that are public and justified will deter corrupt practices and improve participation in public procurement. This is of great benefit to the firm provided that it is a competitive bidder. Also the need to as part of the criteria to take into consideration additional factors that promote the local participation such as the firm been local, the

inclusion of innovative and sustainable solutions as part of proposal response, and other potential award criteria.

iii. Prompt payment should be implemented is critical and this can be by simplifying the documents necessary for making payments and this can be through the use of electronic payment, simplified controls among others.

iv. Also road authorities should provide feedback to bidders regardless of their success or not. This is an important component of facilitating the firms learning. They need to understand why they lost in order to make necessary improvements for the following bids. Lack of such feedback can leave feeling frustrated by the system and possibly decide to avoid the procurement process assuming the system is rigged. In addition, standardisation of rules governing procurement procedures and improving instructions and document formats are also other initiatives needed to be included. This is all because of the benefits in form of time and costs saving and also gives the firms the leverage to substantiate potential grievances.

v. Another initiative is have the authorities organise events where the firms meet and interact with the personnel and discuss the challenges faced in the procurement process. The authorities can offer training and provide technical assistance on preparing responsive proposals thereby supporting the firmsô ability to participate in the procurement process.

vi. Promoting policy stipulating a minimum threshold for local content in road assignment should be formulated. This can be that through setting aside certain percentage of contracts for local engineering consultancy firms, setting certain contract thresholds value for local engineering consultancy firms and making it mandatory for foreign firms to include or associate with local engineering consultancy firms.

6.3 Limitations of the study

The engineering consulting firms had reservations sharing information, especially quantitative data that would have aided in the study. They felt that such data may end up reaching their competitors especially considering that it is a small market. The researcher was therefore only able to obtain qualitative data through interview.

Additionally, accessing the firmsô contacts was quite tasking and often led to non-response. This compelled the researcher to use referral to access the respondents. Availability of the respondents due to the respondentsôbusy schedule was also a challenge and therefore it was necessary to make several visits to the offices and follow-up calls to be made so as to have access to the respondents.

Finally, according to the ACEK membership list there are only 67 engineering consultancy firms in their membership, Out of 60 questionnaires could be administered, seven of the firms were part of the pilot study, only 46 responded. This resulted in a fixed and limited sample size which made some forms of statistical inference impossible and therefore non-parametric tests were adopted.

6.4 Suggestions for Further Research

The study has revealed that the public procurement impact on the engineering consultancy firms participation in public procurement. Further research would be required to find out how these firms are performing on the contracts that they have won. This is so as to be able to identify what areas or competencies do the firms possess and if the policies are promoting their growth and development of the firms. The other reason would be to determine if there is value for money by increased participation of the local engineering consulting firms.

REFERENCES

Akenroye, T. O., & Aju, O. (2013a). A Taxonomy of Approaches for Promoting SMEs Access to Public Procurement Market. *Journal of Enterprising Culture*, *21*(03), 335ï 357. https://doi.org/10.1142/S0218495813500143

Akenroye, T. O., & Aju, O. (2013b). Barriers to SMEs participation in public procurement in Nigeria: some preliminary results. *International Journal of Entrepreneurship and Innovation Management*, *17*(4/5/6), 314. https://doi.org/10.1504/IJEIM.2013.059894

Baark, E. (1999). Engineering consultancy: An assessment of IT-enabled international delivery of services. *Technology Analysis and Strategic Management*, *11*(1), 55ï 74. https://doi.org/10.1080/095373299107582

Caldwell, N., Walker, H., Harland, C., Knight, L., Zheng, J., & Wakeley, T. (2005). Promoting competitive markets: The role of public procurement. *Journal of Purchasing and Supply Management*, *11*(5ï 6), 242ï 251. https://doi.org/10.1016/j.pursup.2005.12.002

Chrisidu-Budnik, A., & Przedańska, J. (2017). The Agency Theory Approach to the Publc Procurement System. *Wroclaw Review of Law, Administration & Economics*, *7*(1), 155ï 165. https://doi.org/10.1227/01.NEU.0000119756.07901.E1

Christodoulou, S. (2003). Study on Procurement of Architectural and Engineering Services for Public Works: Case for Qualifications-Based Selection. *Transportation Research Record*, *1861*(1), 151ï 160. https://doi.org/10.3141/1861-16

Corcoran, J., & McLean, F. (1998). The selection of management consultants: How are governments dealing with this difficult decision? An exploratory study. *International Journal of Public Sector Management*, *11*(1), 37ï 54. https://doi.org/10.1108/09513559810199889

Dawes, P. L., Dowling, G. R., & Patterson, P. G. (1993). Determinants of Pre-Purchase information Search Effort for Management Consulting Services. *Journal of Business-to-Business Marketing*, *1*(1), 31ï 41. https://doi.org/10.1300/J033v01n01_03

Day, J. (2000). Commentary ï The value and importance of the small firm to the world economy. *European Journal of Marketing*, *34*(9/10), 1033ï 1037. https://doi.org/10.1108/03090560010342764

Eisenhardt, K. M. (1989). Eisenhardt AMR 1989.pdf. *Academy of Management Review*. https://doi.org/10.2307/258191

FIDIC. (2011). Quality Based Consultant Selection Guide, (september).

Glover, A. (2008). *Accelerating the SME economic engine: through transparent, simple and strategic procurement*. London.

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate data analysis with readings (5nd ed.)*. *Prentice-Hill, Upper Saddle River*.

Ihua, U. B. (2009). SMEs Key Failure-Factorsز A Comparison between the United Kingdom and Nigeria. *Journal of Social Sciences, 2009 - Krepublishers.Com*, *18*(3), 199ï 207. https://doi.org/10.1080/09718923.2009.11892682

Imamovic, J. (2015). *Buying and selling consulting services in the construction sector - An investigation of competence procurement in public and private sector*. KTH Architecture and the Built Environment, Stocjkholm, Sweden.

ING Bank. (2008). *The Consulting Engineering Sector*.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, *3*(4), 305ï 360. https://doi.org/10.1016/0304-405X(76)90026-X

Jeptepkeny, P. (2015). Effects of Procurement Procedures on Project Performance: A Case Study of Light Construction Projects at Kenya Ports Authority, Mombasa. *Europeon Journel of Logistics Purchasing and Supply Chain Management*, *3*(1), 1ï 11. Retrieved from www.eajournals.org%0AISSN 2054-0930 (Print), ISSN 2054-0949 (Online)

Kaspar, B. L., & Puddephatt, A. (2012). Benefits of transparency in public procurement for SMEs General lessons for Egypt, (March), 1ï 22.

Kenya, G. of. (2007). *Kenya Vision 2030*. Nairobi: Government of Kenya.

Kirmani, S. S. (1991). The Consulting Profession in Developing Countries: A Strategy for Development, 68.

KNBS. (2015). Economic Survey 2015.

KNBS. (2018). *Economic survey 2018*.

Macpherson, A., & Holt, R. (2007). Knowledge, learning and small firm growth: A systematic review of the evidence. *Research Policy*, *36*(2), 172ï 192. https://doi.org/10.1016/j.respol.2006.10.001

McCrudden, C. (2007). *Buying Social Justice; Equality, Procurement and Legal Change.* Oxford University Press.

Mukura, P. K., Kanda, M. K., & Ngatia, P. M. (2016). Role of Public Procurement Oversight Authority on Procurement Regulations in Kenyan State Corporations . A Case of Kenya Electricity Generating Company (KenGen), *6*(3), 190ï 201. https://doi.org/10.6007/IJARAFMS/v6-i3/2254

OCDE, O. para C. e D. E. (2011). Competition and Procurement: Key Findings. Retrieved from http://www.oecd.org/regreform/sectors/48315205.pdf

Office of Fair Trading. (2004). *Assessing the impact of public sector procurement on competition.* London: Econ

Perry, C. (2011). Supporting SME access to public procurement opportunities. *Research Paper*, (December).

Roodhooft, F., & Van den Abbeele, A. (2006). Public procurement of consulting services. *International Journal of Public Sector Management*, *19*(5), 490ï 512. https://doi.org/10.1108/09513550610677799

Saunders, M., Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students*. *Research methods for business students*. https://doi.org/10.1007/s13398-014-0173-7.2

Sporrong, J. (2011). Criteria in consultant selection: Public procurement of architectural and engineering services. Australasian Journal of Construction Economics and Building, 11(4), 59ï 76. https://doi.org/10.5130/ajceb.v11i4.2297

Stork, K. (1999). A Best Practice That Should Be Used More: Single Sourcing. *Purchasing, 127*(5), 27-28.

Trevelen, M., & Sweikhart, S. (1988). A risk/ benefit analysis of sourcing strategies: single vs. multiple sourcing. *Journal of Operations Management, 7*(4), 93 - 114.

Walker, H., & Brammer, S. (2009). Sustainable procurement in the United Kingdom public sector. *Supply Chain Management: An International Journal*, *14*(2), 128ï 137.

https://doi.org/10.1108/13598540910941993

West, D. C. (1997). Purchasing Professional Services: The Case of Advertising Agencies. *International Journal of Purchasing and Materials Management*, *33*(2), 2ï 9. https://doi.org/10.1111/j.1745-493X.1997.tb00025.x

Wittig, W. A. (2002). *Building Value through Public Procurement: A Focus on Africa.*

APPENDICES

Appendix 1 - Questionnaire to Engineering Consultants

Perceptions of Public Procurement by Engineering Consultancy Firms in Kenya

Introduction

The Researcher, Winfred Gichuru, is a student at Strathmore University undertaking a research project towards partial fulfillment of the requirements for Master of Business Administration. The purpose of this questionnaire is to investigate the impact of public procurement on competitiveness of engineering consultancy firms in Kenya.

Section 1: Background Information				
Name of firm				
Name of respondent				
Position in firm				
Firm Specialty				
Incorporation	Local		Foreign	
Is your firm registered with EBK	Yes	No	Registration Class	
Number of registered engineers in employ in the firm	< 10	10- < 25	25 - < 50	>50
Annual Turnover in last 3 years	< 25million	25-<50 million	50–<100 million	>100 million

Firm Level of Participation in consultancy services tenders for the road agencies				
Has the firm ever participated in tenders or provided services for the road agencies	Yes		No	
Number of Tenders participated in last 5 years	< 10	10- < 25	25 - < 50	>50
Firm's success rate in winning tenders in past 5 years	<10%	10 -<25%	25-<50%	>50%
Total value of contracts awarded to the firm in last 5 years(approximate value)	< 25 (mil)	25 - < 50 (mil)	50 - < 100 (mil)	>100 (mil)

In your opinion, please indicate the extent to which you agree with the following statements on aspects of public procurement procedures for consultancy services by the road agencies.

Public Procurement Procedure	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Procurement method usually used by the road agencies is appropriate					
Firms have access to timely information on opportunities					
Tender documents are clear, well prepared and easy to understand and enough time allowed to prepare proposal					
Packaging of contract is too large relative to size of the firm					
The bid security requirement is reasonable					
The payment principle usually adopted by the procuring agency is acceptable e.g. time based, lump sum etc.					
The estimated duration of the assignment is usually adequate					
Contract awarding method usually used by the road agencies is reasonable. e.g. least cost bidder or QCBS, QBS etc.					
The procuring agencies personnel are easily available, offer timely clarifications; organize pre-tender site visits and they are adequate to prepare a good proposal					
The tender evaluation is conducted in an objective and fair manner					
The procuring agency communicate the award of tender to the successful tenderer in a timely manner					
The procuring agency communicate to unsuccessful tenderers the reason for rejection					
The payments for work done is timely					

In your view, does the public procurement procedures for consultancy services by the road agencies have an impact on the firmôs competitiveness? Yes __ No__

Expound

_____

_____

_____

In your view, what aspect of the public procurement procedures should be improved or change so as to have a positive impact of engineering firmôs competitiveness?

_____

_____

_____

In your opinion, please indicate to what extent to which you agree with the following statements on aspects of the evaluation/selection criteria

Selection Criteria	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
The evaluation criteria normally used by the road agencies is reasonable					
The weightings normally used by the road agencies is appropriate					
The qualification criteria in terms of years of firm's experience and the firm's project experience value is reasonable					
The qualification criteria in terms of staff requirements is reasonable					
The sources of information required during the submission of the proposals is reasonable e.g. client references, evidence of previous experience, CVs					
Innovative and sustainability solutions are rewarded to a larger extent in selection of consultant					
Consultant competence is decisive and is rewarded to a larger extent in the selection of consultant					

In your view, what aspect of the evaluation/ selection criteria impactsô the firmôs competitiveness?

_____

_____

_____

In your view, does the evaluation/ selection criteria normally used by the road agencies have a positive impact on the firmôs competitiveness? Yes __ No__

Expound

_____

_____

_____

In your own opinion, indicate your level of agreement with the statements on Public Procurement Performance below

Public Procurement Performance	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Public procurement process is overly formalistic and cost focused					
The workload throughout the year is adequate					
Public procurement related disputes are handled in fair and timely					
The agency personnel are knowledgeable of the process and regulations					
Public procurement promote competition and ensure that competitors are treated fairly					
Public procurement facilitates the promotion of local industry and economic development					
Public procurement system is characterized by corrupt practices					

In your view, does the current public procurement performance of the road agencies have an impact on the firmôs competitiveness? Yes __ No__

Expound

_____

_____

_____

In your view, what other aspects of public procurement by the road agencies have impact on the firmôs competitiveness?

_____

_____

_____

In your view, what should the road agencies do to encourage the competitiveness of local engineering firms?

_____

_____

_____

Thank you for taking time to complete the questionnaire.

Appendix 2 - Interview Guide with Road Agencies Procurement Managers

Introduction

The Researcher, Winfred Gichuru, is a student at Strathmore University undertaking a research project towards partial fulfillment of the requirements for Master of Business Administration.

The purpose of this questionnaire is to gain understanding of procurements practices within the Road Agencies and their impact on development of competitiveness of local engineering consultancy firms.

Section A	
Name of Agency	
Name of Respondent	
Department	
Position	

Public Procurement procedures

1. What are the procurement methods predominantly used by the Agency in procuring engineering consultancy services, and Why?
2. How does the agency publish opportunities?
3. What are the contract awarding method predominantly used by the Agency in procuring engineering consultancy services, and Why?
4. How do you determine the packaging consultancy assignment i.e. what factors are considered?
5. What specific measures can be applied to improve local consultancy firmsôaccess to agencyôs assignments?

Selection Criteria

6. How do you determine the evaluation and qualification criteria when procuring consultancy services
7. Do you think that the determined the evaluation and qualification criteria encourages the participation of local firms?

8. What aspect of the evaluation criteria is not included and would encourage the participation of local firms?

Public Procurement performance

9. Are there specific procurement policies and practices to facilitate access to local firms to the procurement opportunities?
10. Does the Agency monitor the participation of local consultancy firms in any of the agency assignment?
11. What volume and value of works is currently being undertaken by local consultancy firms compared to foreign firms?
12. Has the volume and value of assignments being undertaken by local consultancy firms increased or decreased over the past five years?
13. What are the strengths of local consulting firms in relation to public procurement? (Flexibility, price, local knowledge, closer relationship)
14. What are the weakness of local consulting firms in relation to public procurement? (Lack of adequate resources ï personnel, lack of experience, poor quality, lack of knowledge of tendering process

Appendix 3 – Ethical Approval Letter