

**RESERVATION SCHEMES AND LOCAL FIRM PARTICIPATION IN ROAD
CONSTRUCTION IN UGANDA
A CASE OF SELECTED ROAD CONSTRUCTION FIRMS IN KAMPALA**

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DECLARATION

I Sekanjako Fredrick, declare that this report is my original work, and has not been submitted anywhere else for any academic award.

Signature.....Date.....

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APPROVAL

This is to confirm that this report has been done under our supervision and guidance and has therefore met the report requirements of Kyambogo University and is now ready for submission.

Signature.....Date.....

DR. FRANCIS SENNOGA

Signature..... Date.....

DR. CHARLES NDANDIKO

DEDICATION

I would like to dedicate this work to my friends; Mr. Barugahare Ismael, Mr. Ssenkungu Clive, Mr. Sigombe Richard, Ms. Pamela Nagawa Ssenoga, Mr. Ssewanyana Frank, Mr. Eriyau Moses, Mr. Mutyaba Daniel, Mr. Ndugga Tom and everyone for having given me the courage to move on in this journey.

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LIST OF ABBREVIATIONS

EGP	: Electronic Government Procurement
EU	: European
PPADR	: Public Procurement and Asset Disposal Regulations
PPDA	: Public Procurement and Disposal of Public Assets Authority
UGX	: Ugandan Shilling
UNABCEC	: Uganda National Association of Building and Civil Engineering Contractors
USD	: United States Dollar

ABSTRACT

Reservation schemes in public procurement are seen as crucial initiatives that most of the governments can use to promote economic growth, protect domestic firms against foreign competition and improve the capacity and competitiveness of specific sectors. This study therefore examines the effect of reservation schemes on local firm participation in road construction projects by specifically focusing on the impact of reservation thresholds and contractual conditions on local firm participation. The study adopted a cross sectional survey design and data was gathered from directors and project managers or legal officers of 37 sampled local construction firms in Kampala using both qualitative and quantitative approaches. Regression analysis was used to examine the effect of reservation schemes on local firm participation. Findings revealed that reservation schemes have a statistically significant effect on local firm participation in road construction projects. It was revealed that both reservation thresholds and contractual conditions have a positive contribution on local firm participation. According to the study's findings, an enhancement in contractual requirements and reservation thresholds promotes local firms to secure more bids and participation in subcontracted road construction projects by 38.5%. As a result, the study recommended that, the PPDA should conduct regular monitoring of the procuring and disposing entities to ensure that the guidelines on reservation schemes are respected whenever there is a high value contract for the construction project. In addition, we recommend that the PPDA should continue to run sensitization programs for all local contractors so that they acquire knowledge concerning the application of reservation schemes. Sub-contracting arrangements should be guided by the nature of firm, geographical setting and size of the firm. Lastly, the study recommends that an effort be taken to address the most challenging factors that hinder local firm participation for instance, there should be timely payments for local firms to enable them meet their internal demands for effective contract execution.

Key terms: Reservation schemes, reservation threshold, contractual conditions and local firm participation

CHAPTER ONE

INTRODUCTION

1.0 Introduction

In today's changing environment, reservation schemes in public procurement are seen as crucial initiatives that most of the governments can use to promote economic growth, protect domestic firms against foreign competition, improve the capacity and competitiveness of specific sectors, promote local content, and alleviating poverty and inequality (Thai 2009, Gumisiriza, 2021). In the Ugandan context, public procurement takes a large percentage of government expenditure so, in the process of acquisition of works, goods and services, local firms are faced with stiff competition from foreign firms. Therefore, the government introduced reservation schemes in form of set-asides, contractual conditions, and reservation thresholds that can be reserved for resident and national providers as a mechanism of enhancing participation of national providers in the procurement of works, goods and services. Reservation schemes are necessary for the achievement of socioeconomic objectives in the country. However, the achievement of these objectives requires an active involvement and participation of local labour force, local inputs, technology transfer in road construction projects. The procuring and disposing entities are responsible for creating opportunities for local participation in procurement projects though most of the high value contracts for roads are executed and dominated by foreign contractors. This research study set out to examine effect of reservation schemes on the local firm participation in road construction of Uganda.

1.1 Background of the study

The background of the study was presented in four perspectives that is; historical, theoretical, conceptual, and contextual background.

1.2.1 Historical perspective

In the United States, the Public Works Act of 1977 introduced a reservation scheme that required minority firms to receive 10% of each grant for local project, and this became a centre of focus as a set aside in United States (McCrudden, 2007, Aggrey et al, 2017). A reservation scheme was also introduced in Brazil national feeding law whereby 30% in respect to purchase of food for school feeding was reserved for local farmers (Miranda, 2018). Brazil introduced a reservation scheme to implement the national feeding policy that aimed at using the procurement of school food as a mechanism to enhance sustainable development through purchasing local food from domestic producers (Swensson, 2018). Reservation scheme can be in form of set aside which involves reserving either part or whole of the contract to domestic or local enterprises to promote domestic economic development in the country (McCrudden, 2007).

In the African context, reservation scheme is one of the supplier development initiatives in the construction industry of Zambia. The subcontracting policy requires domestic firms to undertake 20% of the road construction contract as a way of building skills and competencies (Roads Development Agency, 2016, Sikombe, 2021).

1.2.2 Theoretical Perspective

The Domestic Content Protection theory, which Grossman advanced in 1981, served as the study's main framework. According to Grossman, a content protection mechanism mandates that a specified final product contain a predetermined amount of domestic value added (Grossman, 1981). The theory of content protection has been utilised by many studies to explain why regulation is important. Grossman discovered that because the degree of protection is changeable and difficult to forecast, content protection may not succeed in achieving the non-economic goals of the policy maker. Johnson (1960) and Heim (2019) highlighted non-

economic goals, such as national independence and self-sufficiency, which are attained by increasing the percentage of consumption that is provided by domestic production. The idea helps to explain why domestic businesses must be protected in Uganda's public procurement process, given that foreign corporations typically win the majority of lucrative contracts, particularly those for the construction of roads.

1.2.3 Conceptual Perspective

The study had two main variables namely reservation schemes and local firm participation in road construction of Uganda.

Reservation scheme is the policy introduced by the government to reserve specific procurements for national providers who satisfy specific prescribed criteria (Swensson, 2018). Under reservation schemes, only members of the target group or community are eligible to participate, and these reservations intended to develop these target groups. (Sabiiti, & Muhumuza, 2012). Reservation scheme is a policy where certain contracts are reserved for certain categories of bidders (Stoffel et al., 2019).

According to Boakye-Agyei (2009) and (Adjei, 2021) local participation is not only alleviating poverty but also recognized as a condition to ensuring socio-economic development and societal wellbeing in general. Boakye-Agyei (2009) argued that local participation can enable the society to achieve social benefits through allowing people to get involved in project activities.

According to (Gordon, 2009), participation is defined as the process of promoting individuals' capabilities to improving their wellbeing.

1.2.4 Contextual Perspective

This study was in context of construction of roads in Uganda with specific focus on the local construction firms. The guidelines on reservation schemes issued by the PPDA in 2017 introduced a contractual condition in form of subcontracting of sub works, supply of materials, and equipment to be reserved for national providers, the scheme aimed at promoting use of goods, services, local labour, and also building capacity for local contractors who constantly confront stiff competition from foreign contractors. This mandatory subcontracting was amended in 2018 prior to implementation, and the reason was to include resident provider who is incorporated in Uganda for at least two years hence leading to an effective way of empowering local firms by the government (UNABCEC Report, 2019). Despite piloting the mandatory of subcontracting by UNRA in line with guidelines on reservation schemes, A few Ugandan construction firms have been considered under this scheme through executing some of the road works that would have been executed by foreign firms. Building local capacity is one of the major objectives of the roads construction sector in Uganda though foreign firms out compete domestic firms by having both political and financial influence that enable them to obtain high value contracts compared to domestic firms (AI, 2020).

1.3 Statement of the problem

Public procurement is an important activity that countries can utilize to promote socio economic objectives such as protecting domestic firms from foreign competition, focusing on local content, reducing inequalities and poverty. The achievement of sustainable economic growth requires an active involvement and participation of local labour, materials, and products. Despite the efforts aimed at promoting local content through reservation schemes which are in form of contractual conditions, and reservation thresholds, local participation in roads constructions has remained low. This is evidenced by the PPDA study that covered three financial years, where 142 contracts totalling UGX 2,730,011,213,526 were the subject

of the investigation, and these were chosen from Ministry of Works and Transport, and UNRA. About 75% of the contracts were awarded to local suppliers, and only 25% went to foreign contractors. However, in terms of value, foreign contractors had more than 2.5 trillion UGX (2,516,953,159,545 UGX), while domestic suppliers only had 8% of the total amount. Foreign suppliers currently control the majority of the sector's design and construction contracts. Local companies specialize primarily in repairs and maintenance (PPDA Report, 2019). This study therefore sought to examine the effect of reservation schemes on local firm's participation in roads construction of Uganda.

1.4 The purpose of the study

The objective of this study was to establish the effect of reservation schemes on the local firm participation in road construction of Uganda.

1.5 Specific objectives

- i. To establish the effect of reservation thresholds on the local firm participation in road construction of Uganda.
- ii. To establish the effect of contractual conditions on the local firm participation in road construction of Uganda.
- iii. To examine the factors hindering local firm participation in road construction of Uganda.

1.6 Research questions

- i. What is the effect of reservation thresholds on firm participation in road construction of Uganda?
- ii. What is the effect of contractual conditions on firm participation in road construction of Uganda?
- iii. What factors are hindering local firm participation in road construction of Uganda?

1.7 Scope of the study

1.8 Content scope

This study examined the effect of reservation schemes on local firm participation in road construction of Uganda. Reservation scheme is the independent variable with dimensions of reservation thresholds, and contractual conditions. Local firm's participation is the dependent variable with dimension of number of contracts awarded, percentage of local firms employed, , and amount of local materials supplied.

1.9 Geographical scope

The study was conducted in the road construction firms in Kampala-Uganda. The researcher picked interest in this study following the Chinese dominance over road construction in Uganda.

1.10 Time scope

The study was conducted for a period of 8 months from January 2022-November 2022 in order to enable the researcher obtain enough information, and analyse data to draw meaningful conclusions.

1.11 Significance of the study

This research was significant in the following ways:

- i.** Results of this research serves as a reference point for other developing countries on how reservation schemes can be improved to enable the governments and local construction firms in particular to exercise the best practices that will enhance their participation in public procurement especially in large projects.
- ii.** The study sought to add to the academic literature on the link between reservation schemes and local firm participation in road construction which is not common in the existing literature.

1.12 Conceptual framework

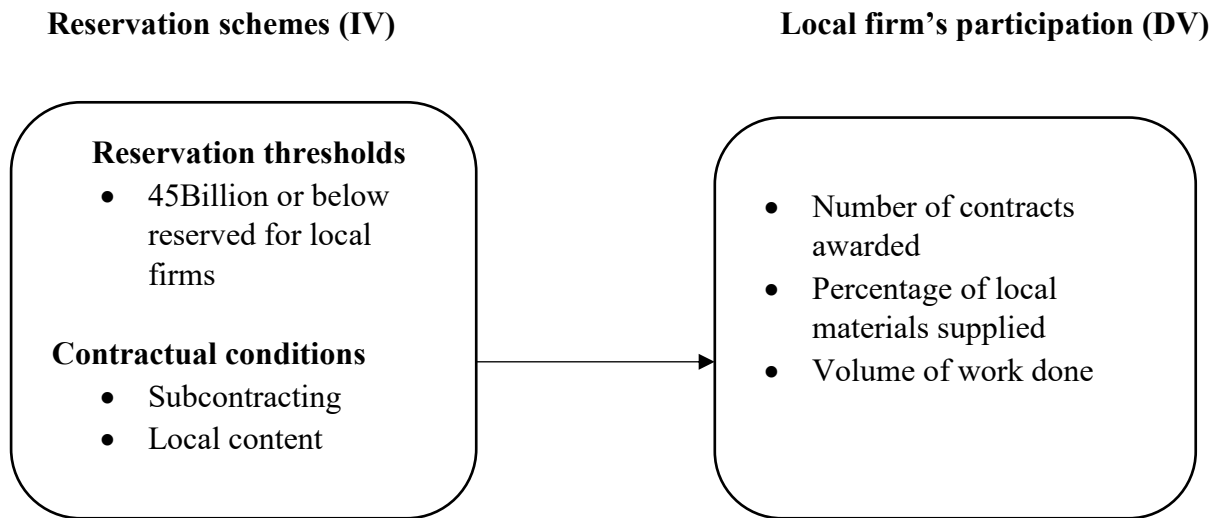


Figure 1: A conceptual Framework for reservation schemes and local firm participation

Source: Adapted from Ssenoga (2010); PPDA (2018)

The conceptual model above indicated the effect of reservation schemes measured by reservation thresholds, and contractual conditions on local firm participation conceptualized as number of contracts awarded, percentage of local materials supplied, and volume of work done.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, the researcher mainly focused on already written information from other academicians or scholars as well as other sources like catalogues on which the researcher based the theoretical foundation. It illustrates additional literature about the effect of reservation thresholds, and contractual conditions on firm participation in various context of the study. The chapter started with reviewing theories, conceptual review, and finally empirical review which was done in accordance with the objectives of the study.

2.1 Theoretical review

The study was guided by the theory of domestic content protection developed by Grossman in 1981. Grossman states that a content protection scheme requires that a given percentage of domestic value added be incorporated in a specific final product (Grossman, 1981). Many researchers have used the theory of content protection to explain why regulation is necessary, according to Grossman, content protection may fall short of the non-economic goals of the policy maker since the degree of protection is unpredictable and impossible to forecast. But Johnson (1960), referenced by Heim (2019), listed non-economic goals, such as national independence and self-sufficiency, which are attained by raising the share of consumption that is provided by domestic production. Various nations experienced an increase in the importation of subassemblies and parts during the industrialization process, which led to a decline in the domestic value added in products made using a variety of procedures. But content protection theory developed as a way to safeguard the middle phases of production. Australia, where laws were developed to safeguard diverse businesses, embraced this notion. The theory assists in explaining the need to protect the domestic industries in the roads construction projects of

Uganda while considering the foreign contractors' dominance over roads construction in the country.

2.2 Conceptual Review

Government procurement accounts for a significant percentage of GDP and has a direct impact on the economy. Estimates based on national accounts data show that governments on average, spend 12% of their GDP on public procurement. Variations reflect different sizes of states, its role in the economy and the presence of large spending projects such as infrastructure investment. For example, national accounts data for 2008 show that the Netherlands, The Czech Republic and Iceland spent more than 15% of their GDP on public procurement. Mexico, Chile and Switzerland spent less than 7% of GDP. Moreover, government procurement is also an important activity in developing countries (Ngeno, 2014). Reservation schemes are part of discriminatory practices in public procurement. Discriminatory practice refers to the tendency of governments to favour domestic firms or industries for public procurement contracts. The government cares about the interests of local businesses whereas foreign firms are discriminated against in competition for public procurement contracts. Various countries such as Kenya, Uganda, Rwanda to mention but a few have introduced reservation schemes in their procurement laws. For instance, in Kenya

According to PPADR (2020) of Kenya provides for the mandatory requirement that is specified in all tender documents as a preliminary evaluation criteria whereby the successful international bidder must ensure;

Transfer of technology, skills and knowledge through training, mentoring and participation of Kenyan citizens

Secure or reserve at least 75% of employment opportunities for Kenyan citizens for works, consultancy and non-consultancy services, of which more than 20% should be reserved for Kenyan professionals.

All bidders must include a local content plan for technology transfer in their bids. This local content plan should include, among other things, a plan demonstrating local industry ties ensuring that at least 40% of the input is derived from locally manufactured items, materials and supplies produced in Kenya or possibly Kenya. The reservation threshold for procurement in respect of works, construction materials and other materials which are manufactured in Kenya is one billion shillings.

Rwanda has a reservation program for local suppliers. Pursuant to the Ministerial Decree Establishing Regulations for Public Procurement dated May 19, 2020. The thresholds are: Only offer values not exceeding one hundred million Rwandan francs (FRW 100,000,000) will be given preference when sourcing goods manufactured or manufactured in Rwanda. For service providers registered in Rwanda providing non-consulting services and consulting services only, bids not exceeding Fifty Million Rwandan Francs (FRW 50,000,000) shall be preferred. Meanwhile, for construction works, the preferred bid is Rwandan 500 million (FRW 500,000,000)

In Uganda, section 59B (2) of the PPDA Act 2003 as amended 2021, a public procurement contract shall be subjected to a reservation scheme in order to promote the use of local expertise and materials, promote participation of local enterprises, promote participation of registered associations of special interest groups or application of specific technologies. Reservation schemes take various forms that is reservation through thresholds, subcontracting as a contractual condition, and sector specific set asides. The PPDA guidelines on reservation

schemes provide for the application of thresholds in respect to road works with in an estimated value of UGX 45 billion or below to be reserved for resident and national contractors.

Justification for reservation schemes

The goal of reservation schemes is to increase the meaningful participation of enterprises that are owned, operated, and influenced by citizens in public procurement. Specific contracts are reserved through reservation programmes, which restrict bids to these chosen citizen firms, procurement requirements for citizen-influenced, citizen-empowered, and citizen-owned businesses are met. According to Shula (2020) reservation schemes set aside specific procurement opportunities for domestic firms by restricting competition to only the targeted local.

Contractual conditions

International Trade Centre (2014); Miranda (2018), the contractual condition sets a fixed percentage of the work to be subcontracted out to firms that meet the required characteristics. USA, applies contractual condition through subcontracting policy whereby all contracts above USD650.000 are required to attract subcontracting condition.

In Zambia, the Ministry of Housing and Infrastructure Development had established a policy allowing local contractors to be given twenty (20%) percent of significant contracts won by international contractors. The goal of the policy was to increase local contractors' involvement in the construction sector and so increase their capability (Shula K, 2018)

In Uganda, the PPDA guidelines also provide for contractual condition for which the foreign firms must comply with when awarded contract in respect to road works above 45 billion of which 30% of the contract value is to be reserved for resident and national providers through subcontracting of sub works, supply of equipment, and materials. (PPDA Guidelines, 2018)

subcontracting opportunities or joint ventures can be created through set aside practices if there concerns about the suppliers' competences to effectively execute the work. For example, the procurement strategy for indigenous businesses in Canadian, reserves particular contracts with an estimated value of \$ 5,000 for only indigenous enterprises. However, the Commonwealth domestic procurement policy in Australia mandates that local businesses be given preference for contracts between \$80,000 and \$200,000 (Lupick, 2017).

Most developed and emerging countries have consistently advocated for the use of government procurement to assist important businesses, such as the construction industry. The most well-known example is the US "Buy America" policy. According to the Buy America Act (1933) and related laws, a major federal legal requirement for a buyer is that any goods or services purchased for a public purpose must be made in the United States. India is well known among developing countries for its support of local businesses, government enterprises, and small businesses. These rules caused a sizable percentage of the infrastructure to be bought domestically. It is estimated that local resources make up 75% of the inputs into energy projects and 100% of the inputs into water and rural road projects, respectively. Furthermore, in accordance with Chinese procurement laws, acquisitions must be made at the federal level unless the required supplies, labour, or services are not available at all or at a reasonable cost (Engineers Report, 2008).

Local participation

Makenya and Mhando (2021) assert that local contractors' ability to participate in the construction industry depends on their performance, which can be gauged by the caliber of their services, their productivity levels, their resource management, and their adherence to the law. However, the amount of local contractors' participation is still quite low in terms of the quantity and magnitude of the contracts issued. Five characteristics, including a favorable

environment, technical proficiency, business opportunity, financial accessibility, and non-financial incentive, can be used to assess the participation of local firms (Adedeji, 2018). The introduction of reservation schemes increased the amount of tender's local firms won from government departments. For instance, during the financial year 2017/ 18, 95% of the government contracts were executed by local firms. However, these contracts were for supplies and non-consulting services with small value specifically below 1 billion. The high value contracts for roads were dominated by foreign contractors (PPDA Report, 2019)

2.3 Empirical Review

2.3.1 Reservation thresholds and local firms' participation

In Malaysia, all contracts for works with an estimated value of RM 50,000 to 350,000 are reserved for local contractors, and at least 50 per cent of the value of the contracts are set aside for local contractors (McCrudden & Gross, 2006; Jones, 2018). Reservation threshold is one of the examples of reservation practices in United states of America and Canada (Cravero, 2017). Reservation thresholds are used to give a priority to local businesses in some countries like Canada, US, and Japan, for example in United states, contracts with an estimated value of \$ 150,000 and \$3000 are reserved for local enterprises (Kang & Miller, 2016, Jehiel et al., 2017).

According to (Cravero, 2017), awarding a contract does not only consider price to favour local firms but also set asides that target a particular group of contractors. However, there was an anxiety that set asides limit participation in the bidding processes of a specified group of bidders, set asides have been practiced in the US and Canada, but treated with fear in the EU legal framework. The European Public Procurement Directives of 2004 and 2014 permitted and broadened the use of set asides respectively Cravero (2017). Set asides have become very crucial practices for creating economic opprtunities for special interest groups in the EU as well. Set asides reserve specific contracts to a particular group of providers that meet the

required criteria, governments are able to create employment opportunities, supplier diversification, and involvement of special interest groups in public procurement through set asides. However, set asides practices have always been regarded as discriminatory practices in European Legal framework. Under set asides, the firms use smaller contracts to create more opportunities for specific group of providers for instance, Canada usually apply set asides to procurement of local food, whereas elsewhere set asides are used for local enterprises, and special interest groups. However, subcontracting opportunities or joint ventures can be created through set aside practices if there concerns about the suppliers' competences to effectively execute the work. For example, the procurement strategy for indigenous businesses in Canadian, reserves particular contracts with an estimated value of \$ 5,000 for only indigenous enterprises. Nonetheless, the commonwealth domestic procurement policy in Australia sets a mandatory set aside for contracts with an estimated value of \$ 80,000 and \$ 200,000 to be reserved for local enterprises (Lupick, 2017). Exclusive practices can compromise quality, and leads to higher prices because potential firms that offer competition are excluded in order to favour a specified group of providers. However, set asides can be crucial practices because they allow governments to closely deal with a small group of firms in order to improve their competencies, also set asides provide employment opportunities to local firms, and ensure immediate allocation of contracts to beneficiaries. Nonetheless, set asides can be made more effective through contractual terms that is; eligibility of the contractor for set asides (Arrowsmith, 2010),

International Trade Centre (2000) and Arrowsmith (2010), set asides are associated with a lot of costs that arise because of limited competition with in the targeted group of providers so, government has to be prepared for the extra costs, or avoiding them by applying set asides on commercial terms. Another challenge of using set aside is that the preferred groups may have limited capacity to become competitive, also set sides may be used because of political pressure

when they are really not required. However, Boyle (2009) and Arrowsmith (2010), argues that contracts may not be set aside for a limited group but for specific firms so, contracts can be strategically placed to ensure competition.

2.3.2 Contractual conditions and local firms' participation

According to Ssenoga (2010), a specified percentage of work must be subcontracted out to firms that agree to meet the required criteria or obligations such as involving specific group of local contractors while undertaking the contract. Nonetheless, contractual conditions expose contractors to challenges during execution of the contract.

According to report of Ministry of Works and supply (2018), the main reason for the introduction of the mandatory subcontracting policy in Zambia is to enhance local contractors' participation in the construction industry as well as empowering them in building their capacity, and jobs *creation*. Different countries such as US, Canada, and Japan are encouraging the promotion of local enterprises who are mostly act as subcontractors. However, it should be noted that the participation of local construction firms as subcontractors in road construction is very crucial as far as building skills, capacities, and technology transfer are concerned. The Construction Industry Development Board in South Africa clearly indicated that all projects related to public sector should done in accordance with the policy interventions on subcontracting that aim to improve its applicability, and encourage development of local skills, capacity, and employment of the local contractors and the black economic empowerment (Mambwe et al., 2020)

According to Moretti and Valbonesi (2015), the European procurement policy of 2011 indicates that subcontracting is a crucial policy to encourage the participation of local enterprises in public procurement contracts. Nonetheless, the regulatory concern with the decision to adopt subcontracting in the execution of government contracts can be discussed

depending on two aspects that is ; introducing strong regulatory procedures with the aim of ensuring fairness in public procurement transactions, and allocation of public resources to contracts with the intention of creating affirmative action policies that enhance the participation of vulnerable enterprises through subcontracting practices.(Moretti & Valbonesi, 2015)

According to Watermeyer (2004) and Kituyi et al. (2017), contractual conditions can be crucial under specific circumstances to achieve socio economic objectives, but contractors face a lot of challenges while executing the contract.

2.3.3 Factors hindering local firm participation

Firms in developing countries face a lot of challenges that inhibit them from getting involved in execution of procurement contracts. These challenges include; lack of plant and equipment, and inadequate financial resources. Fadhil and Tan (2001) indicated that a significant competitive advantage can be gained through research and development, financial resources, and technical expertise though all these enablers were found lacking in local construction. The construction registration board of Tanzania in their profiling study indicated that local contractors face unfair competition, lack of finance, inadequate construction materials, erosion of capital and loss of confidence have hindered the growth of local contractors (Materu,2000; Bala et al., 2009). According to Makenya and Mhando (2021), local contractors face a lot of challenges and these include; inadequate capital, inadequate construction equipment and materials, and finally inadequate work opportunities caused by stiff competition, corruption, favouritism, and bureaucratic tendencies. All of the aforementioned issues prevent local businesses from gaining the expertise and financial security needed to carry out increasingly complicated job projects. Small and medium-sized enterprises (SMEs) predominate in developing nations, but they lack the capacity to compete favourably in highly competitive

public procurement contracts primarily due to a lack of expertise. There are structural and behavioural factors that affect a firm's competitiveness, such as personnel knowledge and skills, firm size, quality control methods, and operational efficiency.

2.4 Summary of Literature review and gap analysis

As much as several studies on local firms have been carried out, a few of them specifically addressed reservation schemes and local firm participation and these were carried out in the Malaysia, US, Canada, and Japan specially for the procurement of food from local farmers, however in Africa for instance, Owiti (2018), the study examined the factors affecting implementation of reservation schemes in Kenya, in Uganda, Atuppa (2021), the study focused on local content and participation of local firms, but reservation schemes were not studied. Therefore, this study sought to close the identified gaps in the literature by establishing the relationship between reservation schemes and local firm participation in road construction of Uganda.

CHAPTER THREE

METHODOLOGY

2.0 Introduction

This chapter clearly shows the methodology that was used in the study with a specific focus on the research design, the population of the study, sample size, sample selection, sampling techniques, data collection tools and procedures, reliability and validity of tools, methods of data analysis to be used, and data presentation, and ethical considerations.

3.2 Research design

Research design is a master plan that specifies the procedures and methods for collecting and analyzing the required information (Zikmund et al., 2010; Islamia, 2017). This study used a cross-sectional survey design that allowed the collection of data from different firms at a point in time (Johnson et al., 2014). This study adopted a mixed method approach for data collection where both quantitative and qualitative data were collected using structured interviews, and a survey questionnaire in order to allow for method triangulation.

3.2 Study population

This study focused on all local road construction firms in Kampala, and majorly concentrated on registered local road construction firms particularly those that were registered on government of Uganda e-procurement portal, the population of local construction firms in Kampala is 41 firms (EGP portal list of registered suppliers 2021-2022).

3.2.1 Target population

Casteel and Bridier (2021), defined target population as the specific group of potential participants to whom the researcher would have access to represent the population of interest. This study targeted project managers and directors as the major unit of inquiry from which data was to be collected.

3.3 Sample Size and Procedure

3.3.1 Sample size determination using quantitative method

The researcher adopted Yamane formula to calculate the sample sizes for this study.

Considering 95% level of confidence (Madow, 1968), formula is indicated below;

$$n = \frac{N}{1+N(e)^2}$$

Where;

n is the sample size,

N- is the population

e- is the error term which is 0.05

From the population of 41 registered road construction firms by EGP and e is 0.05 considering 95% level of confidence.

Therefore,

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{41}{1 + 41 (0.05)^2}$$

$$n = \mathbf{37 \text{ local firms}}$$

From a sample of 37 local construction firms, the study targeted a number of 74 respondents with each firm represented by two respondents who included the Director and Project managers. In situation where one was not present, the study considered legal officers. These categories of respondents were considered in this study because of their wealth experience concerning their firm's participation in road construction and given they are the key decision makers regarding how their firms would capitalize on the reservation schemes.

Table 3.1: Showing targeted population Category and Sample Size

Category	population	sample	Respondents	Target number	Sampling technique
Local construction firms	41	37	Project managers/ Legal officers Directors	37	Purposive
Total	41	37		74	

3.4 Sampling technique

Purposive sampling technique was utilized to obtain samples from list of registered local road construction firms. This was to allow selection of only firms that would provide the relevant information required to achieve the purpose of the study as supported by Etikan, Musa and Alkassim (2016).

3.5 Data sources and collection methods

The study used both primary and secondary sources to collect data which was considered appropriate for this study. Suitable collection instruments such as questionnaires and interviews were used to collect immediate information. Secondary data was obtained from published reports, journals, newspapers, and text books from within and outside reservation schemes and local firm participation.

3.5.1 Data Collection Instruments

3.5.2 Self-administered Questionnaire

The study utilized closed-end self-administered questionnaire divided into sections of background information, reservation schemes and local firm participation. The questionnaire sought to obtain respondents' perception on reservation schemes and local firm participation scored on a five – point Likert scale of 1-Strongly Disagree, 2-Disagree, 3-Not Sure, 4-Agree, 5-Strongly Agree.

3.5.3 Interview Guide

Interview guide was used to collect qualitative data effectively. The researcher designed structured interview guide which was used during the interview of selected key informants.

3.6 Measurement of the variables

Reservation schemes was measured basing on PPDA guidelines on reservation schemes (2018), and Ssennoga (2010) whereas local firms' participation was be measured basing on the number of contracts awarded, amount of local materials used, and volume of work done. A five-point Likert scale was used to measure both the dependent and independent variables.

3.7 Data collection procedure

In this study, the researcher obtained an introductory letter from Kyambogo University Directorate of Research and Graduate Training which was used to seek permission to collect data from the respondents.

3.8 Pilot test study

In this study, a pilot test was conducted on respondents who were selected randomly outside the actual sample for this study, and the questionnaire was administered to these respondents.

3.9 Validity and reliability of instruments

3.9.1 Validity of instruments

To determine the validity of the instruments, the researcher employed the content validity index (CVI). In this instance, all research instruments were pretested on a small sample of respondents in order to find any abnormalities that might have been missed after being validated by knowledgeable supervisors. The following formula was used to calculate the Content Validity Index (CVI), which according to the results was 0.81 and was higher than 0.7 as stated by Pacuto (2017).:

$$CVI = \frac{n}{N} = \frac{22}{27} = 0.81$$

where; n = Total number of items rated by all respondents.

N= Total number of items in the instrument.

3.9.2 Reliability of instruments

Reliability refers to the degree to which data collection tools provide consistent results. (Md Ghazali, 2016). This was ensured through pretesting the questionnaires on few respondents who were selected randomly outside the actual sample for this study, and their responses captured in Statistical Package for Social Scientists (SPSS). Both Factor Analysis and Cronbach's reliability test were used to test reliability (Willmer. M et al, 2019). The results for standardized factor loading were all above 0.5 and Cronbach's Alpha coefficients were also above 0.7 as suggested by Bilim (2009)

Table 3. 2: Validity and reliability of constructs

Construct	Code	Factor loading	Cronbach's Alpha
Reservation threshold	RTH1	.530	.706
	RTH2	.779	
	RTH3	.823	
	RTH4	.683	
	RTH5	.551	
Contractual conditions	CC1	.786	.708
	CC2	.612	
	CC3	.779	
	CC4	.768	
Local firm participation	LFP1	.896	.746
	LFP2	.889	
	LFP3	.650	
	FHFP1	.865	
	FHFP2	.561	
	FHFP3	.758	
Factors hindering firm participation	FHFP5	.715	.701
	FHFP6	.554	

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

3.10 Data Analysis

The data collected was checked and cleansed. Statistical Package for Social Sciences (SPSS) software was used to carry out a series of tests, descriptive statistics of percentages, mean, standard deviation and frequencies were used by the researcher for each of the variable used in the study to indicate the distribution of responses on reservation schemes and local firms 'participation. Correlation statistics was used to establish the connection each variable has with another.

3.11 Ethical Considerations

The study was conducted in the acceptable manner where by the researcher obtained an introductory letter from Kyambogo University Directorate of Research and Graduate Training to seek for permission to conduct this study. Informal and written consent was obtained from the concerned authorities. This enabled the researcher to obtain permission, and confidently meet the respondents, and no confidential information was revealed. The data collected was utilized for only academic purpose.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter presents the analysis and interpretation of the findings. The presentation of findings follows the study objectives that the study sought to address.

4.1 Response rate

In a sample of 37 local construction firms in Kampala, the study targeted 74 respondents. However, out of 74 questionnaires that were supplied out, only 70 were fully answered and returned for analysis. This constituted a response rate of 94.6% which was considered appropriate for the study to draw conclusions from as supported by

4.2 Sample and respondent characteristics

The study gathered information from a sample of local construction firms located in Kampala. From each firm, data was collected from two respondents who included the director and project managers or in the case where one was absent, the legal officer was considered. The study focused on these categories of respondents because they were directly responsible for making decisions that are aimed at benefiting from the reservation schemes. From the analysis, the study findings are presented in Table 4.1

Table 4. 1: Demographic characteristics of respondents

	Category	Frequency	Percent
Gender of respondents	Male	45	64.3
	Female	25	35.7
	Total	70	100.0
Age bracket	20-30 years	8	11.4
	31-40 years	30	42.9
	41-50 years	22	31.4
	Above 50 years	10	14.3
	Total	70	100.0
Highest level of education	Diploma	20	28.6
	Degree	42	60.0
	Postgraduate	7	10.0
	Others	1	1.4
	Total	70	100.0
Position in the company	Project Manager	41	58.6
	Director	23	32.9
	Others	6	8.6
	Total	70	100.0
Period in road construction	Less than 5 years	5	7.1
	5-10 years	46	65.7
	11 years and above	19	27.1
	Total	70	100.0

Source: Primary data (2022)

From the results, it is observed that majority of the respondents who participated in the study were male (64.3%) while female respondents were 35.7%. This implies that project managers and directors in local construction firms of Kampala are mostly male. Regarding respondents age brackets, the results indicated that 11.4% of the respondents were between 20-30 years, 42.9% were between 31-40 years. Respondents between 41-50 years were 31.4% while only 14.3% of the respondents were above 50 years.

Additionally, the findings indicated that majority of the respondents had attained a degree as their highest level of education (60.0%). This was followed by 28.6% who had attained Diploma, 10.0% of the respondents had attained postgraduate while only 1.4% had other qualification which was a PhD. Regarding the position that respondent occupied in the company, 58.6% of the respondents were project managers and 32.9% were directors while only 8.6% were for other positions which included legal officers. This implies that data was collected from the targeted category of respondents who composed study's sample.

Lastly, the experience of firm in road construction was measured using period in road construction. The study findings revealed that 65.7% of the respondents showed that their firms had spent between 5-10 years in road construction, 27.1% had spent 11 years or more and only 7.1% had spent less than 5 years. This implies that data was gathered from the right sample and therefore study findings are reliable for drawing conclusions.

4.3 Descriptive characteristics on study variables

In order to establish the effect of reservation schemes on the level of participation of local firms in construction projects in Uganda, the study required respondents to indicate the level to which they agree or disagree on the contribution of reservation thresholds and contractual conditions to local firm participation in construction projects.

4.3.1 Reservation threshold

With regards to reservation thresholds, respondents were asked to indicate the extent to which reservation thresholds encourage local firm participation in road construction. The results are presented in Table 4.2 below.

Table 4. 2: Descriptive characteristics on reservation threshold

Descriptive Statistics	SD		D		NS		A		SA			
	Mean	SD	F	%	F	%	F	%	F	%	F	%
Introduction of reservation thresholds has increased the number of tenders we win from government departments	4.46	1.00	4	5.7	0	0	2	2.9	18	25.7	46	65.7
Introduction of reservation thresholds has increased bidding competition from other local firms	4.24	.89	0	0	5	7.1	6	8.6	26	37.1	33	47.1
Increased amount of work has increased our investments in plant and equipment for construction	4.21	.56	0	0	0	0	5	7.1	45	64.3	20	28.6
We have been able to increase our staff salaries due to increased revenue	4.1	.98	1	1.4	5	7.1	9	12.9	26	37.1	29	41.4
The increased number of tenders won has increased our revenue	3.87	1.22	3	4.3	11	15.7	5	7.1	24	34.3	27	38.6

N=70

Source: Primary data

Results in Table 4.2 indicate that, reservation thresholds are perceived to be largely contributing to local firm participation in road construction with majority of the respondents agreeing to the items that were used to measure reservation threshold. For instance, respondents agreed that introduction of reservation threshold has increased the number of tender local firms win from government (mean =4.46 and S.D =1.003). This is evidenced by 65.7% of the respondents who strongly agreed and 25.7% who agreed while only 5.7% strongly disagreed to the statement. This implies that reservation thresholds have benefited local construction firms who have registered an increase in tenders especially from government contracts.

Similarly, in regards to whether the introduction of reservation threshold has increased bidding competition from other local construction firms, results revealed that there was agreement from majority of the respondents represented by a mean score of 4.24 and S.D of .892. Specifically, the of distribution of responses shows that 47.1% of the respondents strongly agreed and 37.1% agreed. On the other hand, 7.1% of the respondents disagreed while no one strongly disagreed. This implies that introducing more reservation thresholds will draw more competition from local firms who may benefit from the associated advantages of competition such as quality of tenders.

Regarding whether reservation thresholds have increased the amount of work done by local firms to the capacity of increasing investment in their plant and equipment for road construction, results reveal that respondents agreed (Mean =4.21, SD =0.89). For instance, 28.6% of the respondents strongly agreed and 64.3% agreed. Only 7.1% of the respondents were not sure. No respondent disagreed. This implies that reservation threshold enables local firms to engage in tenders that boost their income and hence develop the capacity to invest in plant and equipment for construction.

Additionally, it was revealed that reservation thresholds boost the income levels of local firms there by enabling them to increase the salaries of staff as indicated by a mean of 0.41 and SD =0.98. This is backed by 41.4% of the respondents who strongly agreed and 37.1% who agreed. Those who disagreed were only 7.1% and only 1.4% strongly disagreed. This implies that when reservation thresholds exist, local firms are able to plan for salary increments in relation.

Lastly, the results show that respondents agree that due to reservation thresholds, a number of tenders have been won which has increased their revenue (Mean =3.87, SD =1.22). This is supported by 38.6% of the respondents who strongly agreed and 34.3% who agreed. Those who disagreed were only 15.7% and only 4.3% strongly disagreed.

All in all, the findings reveal that to local construction firms, reservation threshold have vital role in boosting income, increasing tenders for local firms, drawing competition and support local firms in planning for their staff salaries and investment in capital equipment for construction.

These findings were supported by responses from interviews in which one of the directors of the local firm in Kampala when asked to comment on whether reservation thresholds have benefited the firm had this to say;

“...reservation threshold plays a vital role in determining local firm participation in construction projects. It determines how much resources the firm has to secure in order to satisfactory complete the project. Ever since the reservation threshold policy was introduced and pushed forward by government, local firms have registered tremendous increase in tenders, volume of work and even revenue. For instance, in our firm, we have been able to benefit from the reservation thresholds where our revenues improved by almost roughly 17% in 2021. With reservation threshold in place, we have been able to plan for the human resource capacity and so far, we have added more staff so based on the amount of reservation threshold.” Director 1

Similarly, another director from another firm also had this to say when asked to comment on the same matter;

“...reservation threshold encourages our firm to participate more in local projects in road. Between 2019 to 2021, our firm participated in 3 projects which boosted our revenues. I believe that if it was not due to COVID-19, we would have even won more tenders.” Director 2

4.3.2 Contractual conditions

With regards to contractual conditions, respondents were asked to indicate the extent to which contractual conditions have contributed to local firm participation in road construction. The results are presented in Table 4.3 below.

Table 4. 3: Descriptive statistics on contractual conditions

Descriptive Statistics	SD		D		NS		A		SA			
	Mean	S. D	F	%	F	%	F	%	F	%	F	%
We have hired more staff to cope up with increased volume of work	4.07	.873	2	2.9	2	2.9	6	8.6	39	55.7	21	30
Associating with internal firms through sub-contract has enabled knowledge transfer	4.03	.884	0	0	5	7.1	11	15.7	31	44.3	23	32.9
The increased volume of work through subcontract has increased our revenue	3.96	.770	3	4.3	5	7.1	9	12.9	36	51.4	17	24.3
The increased revenue has enabled us to increase our staff salaries	3.84	1.016	0	0	3	4.3	13	18.6	38	54.3	16	22.9

N=70

Source: Primary data

Results in Table 4.3 indicate that, local firms perceive contractual conditions to be very important for their participation in road construction projects. Results show that majority of the respondents agree that due to contractual conditions, they were encouraged to hire more staff to cope up with increased volume of works (Mean =4.07 and S.D =.873). This is backed by 30% of the respondents who strongly agreed and 55.7% who agreed. However, there were very few respondents who either disagreed or strongly disagreed (2.9% and 2.9% respectively).

Regarding whether the firm’s association with internal firms through sub-contracting has enabled knowledge transfer, majority of the respondents agreed (Mean=4.03, S.D =.884). This was supported by response distribution of 32.9% of the respondents strongly agreeing and 44.3% of respondents agreeing. While only 7.1% of respondents disagreed. This implies that to

local firms' contractual conditions necessitate association of local firms and foreign firms hence encouraging knowledge transfer.

Additionally, the results further revealed that there was agreement from local firms that as a result of contractual conditions, there was an increase in volume of work for local firms arising from sub-contracting which increased revenue (Mean = 3.96, SD = .770. This was represented by 24.3% of respondents who strongly agreed, 51.4% agreed, 12.9% were not sure and only 7.1% and 4.3% disagreed and strongly disagreed respectively. This implies that to local firms; contractual conditions are vital.

Lastly, the results show that majority of the respondents perceived an increase in revenue arising from contractual conditions to be enabling the firms to plan for salary increase (mean =3.84 and S.D =1.016). This was represented by 22.9% of the respondents who strongly agreed and 54.3% who agreed. Meanwhile, only 18.6% were not certain of their stand and, 4.3% of respondents disagreed. This implies that contractual conditions determine the income levels of local firms arising from tenders and thus a basis for salary increments for staff especially those involved in the contract.

The findings are supported by the interview responses from one of the Directors who when asked to give his opinion on whether contractual conditions have facilitated local firm participations had this to say;

“...contractual conditions often define the nature of engagement between local firms and contractors. Contractual conditions enable the firm to assess whether they have the capacity to perform in the project. It is therefore very paramount that contractual conditions are clearly defined and favorable for both local firms and the contractors or else they may become hindrance to participation.”

Director 3

4.3.3 Local firm participation in road construction projects

In regards to local firm participation in road construction projects, respondents were asked to indicate the level to which they agree or disagree to whether local firms have had an increase in tenders won over years, increase in amount of local materials used and increase in volume of work done by local firms due to introduction of reservation schemes. Table 4.4 below presents the findings.

Table 4. 4: Descriptive statistics on local firm participation

Descriptive Statistics	SD		D		NS		A		SA			
	Mean	S. D	F	%	F	%	F	%	F	%		
The increase in number of tenders won has increased by a percentage of over 10% since the introduction of reservation thresholds.	3.89	.925	2	2.9	3	4.3	13	18.6	35	50	17	24.3
The increase in amount of local materials used has increased by a percentage of over 10% since the introduction of contractual conditions.	3.83	.978	3	4.3	4	5.7	10	14.3	38	54.3	15	21.4
The increase in volume of work done has increased by a percentage of over 10% since the introduction of contractual conditions	3.79	.961	1	1.4	9	12.9	8	11.4	38	54.3	14	20

N=70

Source: Primary data

The study used three items to measure perceived level of local firm participation in road construction in Kampala. From results in Table 4.4, it was revealed that respondents perceived local firm participation to be gradually increasing. For instance, there was a relative agreement from majority of respondents that there was an increase in the number of tenders won by local firms which was estimated to have increased by 10% since the introduction of reservation

threshold (Mean =3.89 and S.D of .925). These responses were distributed as follows, 24.3% of the respondents strongly agreed, 50% agreed, 18.6% were not so sure while 4.3% disagreed and only 2.9% of the respondents strongly disagreed. This implies that local firm participation in road construction projects is increasing.

Regarding whether there was an increase in amount of local materials used during construction projects, on average (Mean =3.83 and S.D =.978), majority of the respondents agreed that indeed there was an increase by 10% since the introduction of contractual conditions. These responses were distributed as follows; 21.4% of the respondents strongly agreed, 54.3% agreed, 14.3% were not sure while 5.7% disagreed and only 4.3% strongly disagreed to the statement. This implies that local materials are used which accounts for local firms' level of participation in road construction projects.

Lastly, majority of the respondents agreed that there was an increase in volume of work done by local firms by at least 10% since the introduction of reservation schemes as represented by mean of 3.79 and S.D of .961. This is backed by 20% of the respondents who strongly agreed and 54.3% who agreed. There was however, a small number of respondents who either disagreed or strongly disagreed with a percentage of 12.9% and 1.4% respectively. This shows that volume of work was anticipated to be rising an indication that local firm participation was increasing as well.

From the interview responses, when asked to describe the level of local firm participation, the Director of one of the construction firm noted that;

“The level of firm participation is generally low and those that have participated before may have benefited from the reservation schemes. Our firm between 2017-2021 was able to win construction tenders for example reconstruction of kayinda road 0.55km, NWSC road-0.65km. We have more hope that number will increase over time because the introduction of reservation schemes has highly benefited a number of firms.”

Similarly, another director also said;

“In 2017 our firm won construction tenders for example reconstruction of Magambo road -0.9 km, Dembe-kilowazo 3.0km, kigoowa-1.9km and Kimera - 1.4km. Because of this I can say that our participation in road construction has gradually grown over time and I believe that a number of local firms have indeed witnessed an increase in participation.”

4.4 Relationship between variables

The study performed correlation to establish the nature of relationship between study variables. This helped to establish whether there was a multicollinearity effect on the study variables before testing for the linear effect of reservation schemes on local firm participation.

Table 4. 5: Correlation results on relationship between variables

Variables		1	2	3
Reservation threshold (1)	Pearson Correlation	1		
Contractual conditions (2)	Pearson Correlation	.405**	1	
Local firm participation (3)	Pearson Correlation	.471**	.580**	1

** . Correlation is significant at the 0.01 level (2-tailed).

From the correlation results above, it is observed that there is a statistically significant relationship between reservation threshold and local firm participation ($r = 0.471$, $P < 0.05$). This implies that the introduction of reservation threshold is associated with increase in local firm participation in road construction. Similarly, it is also seen from the results that contractual conditions have a statistically significant relationship with local firm participation in road construction ($r = 0.58$, $P < 0.05$). This implies that an improvement in contractual conditions is positively associated with an increase in local firm’s participation in road construction.

4.5 Regression results

The study aim was to establish the effect of reservation schemes on local firm participation in road construction. The study therefore performed regression analysis to establish the linear effect of reservation threshold and contractual conditions on local firm participation.

4.5.1 Reservation threshold and local firm participation

The study performed a linear regression in a bid to establish the effect of reservation threshold on local firm participation in road construction projects. The regression results are presented in Table 4.6.

Table 4. 6: The regression results on reservation threshold and local firm participation

		Coefficients				
		Unstandardized		Standardized		
		Coefficients		Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.299	.581		6.741	.029
	Reservation threshold	.607	.138	.471	4.405	.000
Model Summary						
R-Square= 0.222						
Adjusted R-Square = 0.211						
F-value = 19.403						
N=70						
Dependent Variable: Local firm participation						

Source: Primary data (2022)

From the findings presented in Table 4.6, it is observed that the regression model was a good fit and thus, reservation threshold significantly explain the variations in local firm participation in road construction ($F=19.403$, $P\text{-value}<0.05$). Additionally, the adjusted R^2 of 0.211, shows that reservation threshold explains up to 21.1% variations in local firm participation while 78.9% may be explained by other factors. The beta of 0.471 shows that an improvement in reservation threshold by one unit is associated with 0.471 increase in local firm participation

in road construction. This finding therefore implies that reservation thresholds are very vital in encouraging local firms to engage in road construction projects in Uganda.

4.5.2 Contractual conditions and local firm participation

In order to the effect of contractual conditions on local firm participation in road construction, a regression model was performed so as to establish the linear effect between the two variables as observed in Table 4.7.

Table 4.7: The regression results on contractual conditions and local firm participation

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.077	.476		2.262	.027
Contractual conditions	.693	.118	.580	5.864	.000

Model Summary
 R-Square= 0.336
 Adjusted R-Square = 0.326
 F-value = 34.387
 N=70

Dependent Variable: Local firm participation

Source: Primary data

Results in Table 4.7 show that the model was a good fit for the data which means that contractual conditions significantly explain the variations in local firm participation in road construction (F=34.387 and P-value<0.05). It is observed that contractual conditions explain 32.6% variations in local firm participation in road construction and 67.4% may be explained by other factors (adjusted R² =0.326, P< 0.05). Furthermore, beta of 0.580 shows that an improvement in contractual conditions by one unit, is associated with 0.58 an increase in local firm participation in road construction. It therefore implies that contractual conditions account for why local firms may increase or reduce their participation in road construction in Uganda.

4.5.3 The effect of reservation schemes on local firm participation

A linear multiple regression was performed to establish the combined contribution of reservation scheme constructs which include reservation threshold and contractual conditions on local firm participation in road construction. The results are presented in Table below.

Table 4. 8: The regression results on reservation schemes and local firm participation

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	.100	.578			.173	.864
Reservation threshold	.364	.133	.283		2.741	.008
Contractual conditions	.556	.124	.465		4.504	.000

Model Summary

R-Square= 0.403

Adjusted R-Square = 0.385

F-value = 22.596

N=70

Dependent Variable: Local firm participation

Source: Primary data

From the regression results in Table 4.8, the F-Statistic of 22.596 and P-value<0.05 show that the regression model is statistically significant which implies that reservation schemes which is a combined composition of reservation threshold and contractual conditions significantly explain the variations in local firm participation in road construction. The adjusted R² of 0.385 indicates that when both reservation thresholds and contractual conditions are considered, they explain 38.5% variations in local firm participation in road construction. However, according to the beta coefficients (reservation schemes, beta =0.283 and contractual conditions, beta =0.465), it is observed that contractual conditions have a higher contribution to local firm participation than reservation thresholds. This implies that as government seeks to improve local firm participation in road construction, both reservation threshold and contractual

conditions are vital but much consideration should be placed towards improving contractual conditions.

4.6 Factors hindering local firm participation

The study focused on establishing the major factors that were hindering local firm participation in road construction projects despite existence of reservation schemes. Respondents were required to rate their perceptions and descriptive frequencies and percentages were used to analyze the responses as observed in Table 4.9.

Table 4.9: Factors hindering local firm participation

Descriptive Statistics	SD		D		NS		A		SA			
	Mean	S. D	F	%	F	%	F	%	F	%		
Inadequate financial resources discourage a firm to participate in road construction	4.11	.925	0	0	7	10	5	7.1	31	43.3	27	38.6
Lack of tax compliance	3.96	1.01	0	0	11	15.7	4	5.7	32	45.7	23	32.9
Local firms lack plant and equipment	3.49	1.29	5	7.1	18	25.7	1	1.4	30	42.9	16	22.9
Lack of knowledge of the available opportunities	3.36	1.11	0	0	23	32.9	11	15.7	24	34.3	12	17.1
Lack of formal registration	3.07	1.05	0	0	30	42.9	11	15.7	23	32.9	6	8.6

N=70

Source: Primary data

From the findings, based on responses from the local construction firms, the study established that local firms experienced a number of factors that were hindering their participation in road construction. Regarding whether inadequate financial resources discourage firms to participate, a mean of 4.11 was registered with majority of the respondents (38.6%) strongly agreeing and

43.3% agreed. Those who were not sure were 7.1% while only 10% of the respondents disagreed with none strongly disagreeing. This implies that inadequate financial resources were one of the hindering factors for local firm participation.

There was also agreement amongst majority of the respondents that lack of tax compliance was also hindering participation of local firms with a mean score of 3.96 where 32.9% of the respondents strongly agreed and 45.7% of respondents agreeing. However, 5.7% of the respondents were not sure, 15.7% disagreed and none of the respondents strongly disagreed. In regards to whether local firms' lack of plant and equipment was also a hindering factor, 22.9% of the respondents strongly agreed and 42.9% agreed. However, 25.7% of the respondents disagreed and 7.1% disagreed. This implies that whereas there was a relative agreement, the number of respondents who disagreed should not be underestimated which means that it was not highly ranked.

Similarly, for the case of lack of knowledge on the available options as a limiting factor, 17.1% of the respondents strongly agreed and 34.3% agreed. Whereas this was the case, 32.9% of the respondents were contrary and they disagreed while only 15.7% were not sure. Lastly, lack of formal registration was ranked the least hindering factor with only 8.6% of the respondents strongly agreeing and 32.9% agreeing. However, whereas none of the respondents disagreed, 42.9% of the respondents disagreed. This implies that respondents were equally divided on this factor hence a resultant mean of only 3.07.

The interview responses with various groups of individuals whose firms had experience on participation in road construction all pointed out to the same factors to be hindering their participation. For instance, in support of the findings, the interview responses from the Director of Local firm who when asked to give his opinion on which identifiable factors limited participation of local firms in road construction had this to say;

“Local firms are facing it difficult to compete for the projects especially against foreign firms because of a number of factors among which include; lack of information on reservation schemes, limited financial resources, limited machinery and other equipment required in road construction. Additionally, corruption has hampered participation because for a local firm to win a project, it has to part with a lot of money to bribe which is totally wrong. In fact, because of these factors, our firm last participated in road construction project in 2017. All in all, one should know that the operational environment for local firms is completely unfavorable. If a firm is not financially strong, it is likely to miss out on a number of project opportunities.”

All in all, the factors identified in this study were affecting local firm participation in road construction and if not well managed would continue limiting participation over time.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The chapter presents a detailed discussion of results based on the study objectives and research questions. It further presents conclusions and recommendations for action and areas for further study.

5.1 Summary of findings

The study mainly focused on establishing the effect of reservation schemes on local firm participation in road construction activities in Uganda. The study gathered data from a number of selected road construction firms in Kampala which have been beneficiaries of the reservation schemes. The study was guided by two specific objectives which included; to examine the effect of reservation thresholds on local firm participation and to examine the effect of contractual conditions on local firm participation in road construction. From the analysis, the descriptive findings demonstrated high level of agreement from local firms that reservation schemes are very vital in drawing local firm participation in road construction. For instance, the respondents perceived reservation thresholds to have increased a number of tenders awarded, increased the bidding competition, increased investments and facilitated the local firms to win a number of tenders. Similarly, the descriptive findings illustrate that contractual conditions were also perceived to be very important by local firms. For instance, it was perceived that due to contractual conditions, local firms have been able to hire staff that meet contractual conditions, local firms agree they have associated with other internal firms due to sub-contracts, the firms agree that their volume of work due to sub-contracting has increased and there has been increased revenue generated from meeting the contractual conditions. Regarding establishing the effect of reservation schemes on local firm participation, regression analysis was performed. The statistical findings from the regression models indicated that; (i)

reservation thresholds have a statistically significant effect on local firm participation in road construction. When the reservation thresholds are increased, there is a likelihood that local firm participation will increase. (ii) the findings demonstrated that contractual conditions also have a significant effect on local firm participation where in case of any improvement in contractual conditions, there would be an increase in local firm participation in road construction.

5.2 Discussion of findings

Generally, the observation from the findings indicate that reservation schemes have a significant effect on local firm participation in road constructions. This is based on the evidence from the construction firms located in Kampala from which the study was conducted. The discussion of findings is therefore organized according to the study objectives as presented below.

5.2.1 Reservation thresholds and local firm participation

The study aimed at establishing the effect of reservation threshold set aside by the government on local firm participation in road construction. Based on the regression analysis that were performed, the study established that reservation thresholds have a significant effect on local firm participation. In situations where the thresholds are clearly defined and improved, there is a likely boost for local firms to participate in road construction. Local firms argue out that because of the reservation thresholds, they are often clear about the standards and objectives to be met during a sub-contract. The reservation threshold may support local firms to understand the volume of work and make internal preparations on what best they need to do to achieve the sub-contracted projects. Reservation threshold determines the level of engagement between the main contractor and the sub-contracted. This study finding is in support of the guiding principle of the domestic content protection theory developed by Grossman (1981) which asserts that domestic industries are very vital in domestic development and therefore a given percentage of

domestic value should be incorporated in final product. The theory calls for protection of intermediate stages of production of domestic firm especially when there is a need to achieve non-economic objectives of policy maker. The protection of domestic service providers may therefore take form of thresholds that define the level of activities they are to engage in. The findings also concur with findings of Ssenoga (2010) who analyzed several discriminatory procurement practices that have an effect on socio-economic goals and established that set asides/ reservation thresholds, contractual conditions or local content requirements, and qualification criteria are equally important. The findings are also in congruence with Miranda (2018) who asserts that reservation thresholds increase local firm participation because it isolates competition since only targeted group of domestic service providers compete for the contracts. Similarly, findings agree with Shula (2020) who also notes that reservation thresholds are important because they set aside specific procurement opportunities for only domestic firms through restricted competition. May local firms often experience stiff competition from large foreign firms and often tend to lose out to such firms. However, setting aside a reservation threshold specific for local firms may boost participation form domestic firms.

5.2.2 Contractual conditions and participation of local firms

The study examined the impact of contractual conditions as a form of reservation scheme on local firm participation in road construction. The findings indicated that there is a significant impact of contractual conditions on local firm participation given that it explains the variations in the level of participation of local firms. However, Local firms have often raised concerns over the contractual conditions for road construction projects. Some of them argue out that contractual conditions have left them with no option but rather give up on the projects and yet in this study, it has been revealed that they impact the level of participation. Therefore, since the governments are moving towards reservation schemes, there is a need to improve on the

contractual conditions or else they serve no purpose in trying to boost local firm participation. Africa in particular has witnessed over 80% of the road construction projects going to foreign firms because of the contractual conditions that sometimes limit local firm participation. The study findings agree with Moretti and Valbonesi (2015) who indicate that contractual conditions such as sub-contracting are very crucial in encouraging local firms participation in public procurement contracts. Similarly, the findings are in congruence with Abu Bakar and Tufail (2012) and Mambwe et al. (2020) who also noted that sub-contracting is a form of contractual condition that is very crucial for local firms' participation in construction because it builds competence and allows technology transfer necessary for local firm's competitiveness for future contracts. However, the findings are contrary to Kituyi et al. (2017) who indicated that contractual conditions are only crucial under certain condition because contractors often experience a number of challenges when executing the contracts.

All in all, improvement of contractual conditions should not be under looked by government. Sub-contracting is a form of contractual condition that may be used to encourage local firm participation.

5.2.3 Factors hindering local firm participation in road construction projects

The study established that there are a number of challenges experienced by local firms which have become a limiting factor for their participation in road construction projects in Uganda. For instance, the study established that the major hindering factors included; delayed payments which has affected participation in future contracts. Local firms often experience liquidity challenges as a result of delayed payment and yet construction projects require a lot of funding. Besides, the study also established that local firm participation is hindered by corruption tendencies which have become a very big vice in African governments. Local firms note that there are limited transparent procedures for winning contracts. They are often required to bribe

in exchange of the contract and as a result, they get discouraged from participating in road contracts. High bidding costs were also established to be one of the limiting factors. Local firms are often unable to compete favourably during the bidding process because of the associated costs which they may find difficult to meet within shortest period possible.

Additionally, the study established that lack of awareness of procurement developments, reforms and initiatives in favour of local firm participation also limits their participation. Lack of such information is very crucial in stopping local firms from involving into construction projects because they often think that such huge projects require well established firms. The local firms also indicated that another limiting factor is inadequate financial resources and yet road construction projects require huge sums of money which domestic firms are unable to meet. Other notable challenges are inadequate information regarding procurement processes, lack of tax compliance, lack of equipment and lack of formal registration.

In support, the study findings concur with Makenya and Mhando (2021) who also established that local contractors face a lot of challenges such as inadequate capital, inadequate construction equipment and inadequate work opportunities caused by stiff competition, corruption, favoritism, and bureaucratic tendencies. Similarly, the findings are in congruence with Ssenoga (2010) who also had established that developing countries are dominated by SMEs that don't have capacity to compete favorably in highly competitive public procurement contracts mainly due to inadequate expertise.

5.3 Conclusion

The study aimed at establishing the effect of reservation schemes on local firm participation in road construction. It was established that reservation schemes in forms of reservation threshold and contractual conditions such as sub-contracting have a significant effect on local firm participation. The study therefore concludes that, as governments seek to enhance local firm

participation, keen interest should be placed on reservation schemes. Both reservation thresholds and contractual conditions have a vital role to play in drawing interest from local firms to participate in road construction projects. Furthermore, the study concludes by placing more emphasis on the major factors that have been identified by local firms as hindering factors as delayed payments, corruption tendencies, lack of information and limited capacity and equipment for road construction.

5.4 Recommendations

Given that reservation schemes inform of reservation threshold and contractual conditions have a significant positive contribution on local firm participation in road construction as indicated by the study findings, the study recommends the following.

First, improving enforcement of the guidelines on the reservation schemes that promote local content. In particular, the PPDA should conduct regular monitoring of the procuring and disposing entities to ensure that the guidelines are respected whenever there is a high value contract for the construction project. Also, the PPDA should continue to run sensitization programs for all local contractors so that they acquire knowledge concerning the application of reservation schemes.

Secondly, we recommend that contractual conditions for sub-contracting be lenient enough for local firms. They should be designed according to the contextual setting rather than standardizing at national level. This will allow most local firms participate especially when they fit into a given context. Therefore, sub-contracting should be guided by the nature of firm, geographical setting and size of the firm.

Lastly, the study recommends that an effort be taken to address the most challenging factors that hinder local firm participation for instance, there should timely payments for local firms to enable them meet their internal demands for effective contract execution.

5.5 Area for further research

Given that this study was limited to construction firms, I recommend that further studies be conducted on the effect of reservation schemes on local firm participation in oil and gas sector in Uganda.

A study may also be conducted to establish the mediating role of stakeholders' participation on the effect of reservation schemes on contract performance of local of firms.

A study may also be conducted to examine the factors that limit the implementation of reservation schemes in Uganda.

REFERENCES

- Adedeji, et al. (2018). Mediating effects of indigenous oil firms' participation and backward linkages on the relationship between local content policy and job creation: Insightful from Nigeria. *Cogent Business and Management*, 5(1), 1–21. <https://doi.org/10.1080/23311975.2018.1515576>
- Adjei, et al. (2021). Local Participation in Community-Based Development Projects in Ghana. *International Journal of Social Ecology and Sustainable Development*, 13(1), 1–13. <https://doi.org/10.4018/ijsesd.2022010104>
- Aggrey et al. (2017). *Effect of Procurment reservation practices on service delivery in Kenya*. 5(12), 225–234.
- Al, G. et. (2020). *Public Expenditure Governance in the Roads Sector, Kampala: ACODE. Policy Research Paper Series No. 100* (Issue 100).
- Arrowsmith, S. (2010). *Horizontal policies in public procurement*. 10(2), 1–23.
- Bilim, E. ve. (2009). Misuses of KR-20 and Cronbach's Alpha Reliability Coefficients KR-20 ve Cronbach Alfa Katsayılarının Yanlış Kullanımları. *Education and Science*, 34(152), 101–112. <http://egitimvebilim.ted.org.tr/index.php/EB/article/view/595>
- Casteel, A., & Bridier, N. L. (2021). Describing Populations and Samples in Doctoral. *International Journal of Doctoral Studies*, 16, 339–362.
- Cravero, C. (2017). Socially Responsible Public Procurement and Set-Asides: a Comparative Analysis of the US, Canada and the EU. *Arctic Review on Law and Politics*, 8(0), 174–192. <https://doi.org/10.23865/arctic.v8.739>

- Egineers Report. (2008). *Increasing local content in the procurement of infrastructure projects in low income countries.*
- Gordon, I. (2009). The vicuña: The theory and practice of community based wildlife management. *The Vicuña: The Theory and Practice of Community Based Wildlife Management, January*, 1–124. <https://doi.org/10.1007/978-0-387-09476-2>
- Grossman, G. M. . (1981). *The Theory of Domestic Content Protection and Content Preference.* 96(4), 583–603.
- Gumisiriza, P. (2021). *Public Procurement in Uganda. January.* <https://doi.org/10.1007/978-3-319-31816-5>
- Heim, I. (2019). *Local content policy and value co-creation: adopting information technologies in the oil and gas industry. January.*
- Islamia, J. M. (2017). Research design Research design. *Research in Social Science: Interdisciplinary Perspectives, September*, 68–84. [file:///E:/Documents/dosen/buku Metodologi/\[John_W._Creswell\]_Research_Design_Qualitative,_Q\(Bookos.org\).pdf](file:///E:/Documents/dosen/buku%20Metodologi/[John_W._Creswell]_Research_Design_Qualitative,_Q(Bookos.org).pdf)
- Jehiel, P., Lamy, L., Jehiel, P., Lamy, L., Working, P. S. E., & Lamy, L. (2017). *On the benefits of set-asides To cite this version : HAL Id : halshs-01557657.*
- Johnson, F., Beeken, R. J., Croker, H., & Wardle, J. (2014). Do weight perceptions among obese adults in Great Britain match clinical definitions? Analysis of cross-sectional surveys from 2007 and 2012. *BMJ Open*, 4(11), 4–9. <https://doi.org/10.1136/bmjopen-2014-005561>
- Jones. (2018). *Public Procurement in Malaysia (Vol. 36, Issue 4).*

- Kituyi, A. W., Oketch, J. R., Namusonge, G. S., & Sakwa, M. (2017). *Effect of Procurement Reservation Practices on Service Delivery in Kenya: A survey of public institutions in Kenya. A critical review*. 5(12), 225–234.
- Lupick, D. (2017). *Social Procurement State of Practice* (Issue December).
- Madow, W. G. (1968). Elementary Sampling Theory. *Technometrics*, 10(3), 621–622.
<https://doi.org/10.1080/00401706.1968.10490610>
- Makenya, A. R., & Mhando, Y. B. (2021). Factors Behind Deficient Participation of Local Civil Works Contractors in Carrying Out Bituminous Road Works in Tanzania. *International Journal of Sustainable Construction Engineering and Technology*, 12(4), 1–10. <https://doi.org/10.30880/ijscet.2021.12.04.001>
- Md Ghazali, N. H. (2016). A Reliability and Validity of an Instrument to Evaluate the School-Based Assessment System: A Pilot Study. *International Journal of Evaluation and Research in Education (IJERE)*, 5(2), 148. <https://doi.org/10.11591/ijere.v5i2.4533>
- and best practices, Working Paper, No. 176, International Policy Centre for Inclusive Growth (IPC-IG), Brasilia This Version* (Issue 176).
- Miranda, A. (2018). Public Food Procurement From Smallholder Farmers: Literature review and best practices. In *International Policy Centre for Inclusive Growth (IPC-IG) Working Paper* (Issue 176).
- Moretti, L., & Valbonesi, P. (2015). Firms' qualifications and subcontracting in public procurement: An empirical investigation. *Journal of Law, Economics, and Organization*, 31(3), 568–598. <https://doi.org/10.1093/jleo/ewv001>
- Ngeno, J. K. (2014). *Effect of Discriminatory Public Procurement Practices on*. 4(4), 220–240.

- Pacuto, S. N. (2017). European Journal of Open Education and E-learning Studies Pedagogical usability and effectiveness of the E-learning system in Muni University , Uganda. *European Journal of Open Education and E-Learning ...*, 2, 109–128. <https://doi.org/10.5281/zenodo.843555>
- PPDA . (2018). *Guidelines on reservation schemes* . KAMPALA: PPDA.
- PPDA. (2019). *Study to Profile key Sectors of the economy and identify existing capacities in the country*.
- PPADR. (2020). Procurement and disposal act 2020. *Kenya Gazette PPDR 2020*, 4(1), 9–10.
- Sabiiti, C. K., & Muhumuza, E. (2012). *Second generation procurement. Moving from compliance to results in public procurement. Trends, challenges and opportunities from the Uganda experience. In International Public procurement conference, Seattle, USA*.
- Shula, K. (2020). *Participation of Local contractors in the Zambian Construction industry*. www.zambiachamber.org
- Sikombe, S. (2021). *Knowledge transfer in institutionalised supplier development and organisational performance: Evidence from the construction industry in Zambia* (Issue 217080939).
- Ssennoga, F. (2010). *Discriminatory procurement policies: PhD dissertation, Univeristy of Twente*.
- Stoffel, T., Cravero, C., La Chimia, A., & Quinot, G. (2019). Multidimensionality of sustainable public procurement (SPP)-exploring concepts and effects in Sub-Saharan Africa and Europe. *Sustainability (Switzerland)*, 11(22), 1–24. <https://doi.org/10.3390/su11226352>

Swensson, L. F. J. (2018). *Aligning policy and legal frameworks for supporting smallholder farming through public food procurement. Working paper* (Issue 177).

UNABCEC Report. (2019). *Genuine players in construction on same footing*

APPENDIX I: QUESTIONNAIRE

Dear Respondent,

I am a student of Kyambogo University pursuing **Master of Science in Procurement and Supply Chain Management**. As a partial requirement for graduation, I am conducting a study titled “**Reservation schemes and local firm’s participation in road construction of Uganda**”.

Reservation scheme under this study is a form of targeted procurement that allows the government to reserve a certain percentage of its procurements for a specified category of providers. Local firm participation means the level of involvement local firms in road construction. Kindly, you have been selected as a respondent to provide me with your views on this study. The information provided will be kept and treated with utmost confidentiality and used for only academic purposes.

Kindly request you to spare 5-10 minutes to fill this questionnaire.

SECTION A: BACKGROUND INFORMATION

Indicate your response to the items below by ticking in the boxes provided

What is your Gender

1) Male		2)Female	
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What is your age bracket?

1) 20-30 years		2) 31-40 years		3) 41-50 years		4) above 50 years	
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What is your highest level of education?

1) A 'level		2) Diploma		3) Degree		4)Postgraduate		5)Others specify	
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What is your position in the company?

1) Project manager		2) Director		3) Others specify	
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For how long has this company been in the road construction Sector?

1) less than 5 years		2) 5-10 years		3) 11 years and above	
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SECTION B: RESERVATION SCHEMES

(I) Reservation thresholds

According to PPDA guidelines on reservation schemes 2018, all road works with in an estimated value of UGX 45 billion are reserved for resident and national contractors with an intention of enhancing local firm participation in the road construction. In view of this, kindly indicate the extent you agree with the following observations in respect to the effect of reservation thresholds on local firm participation in road construction of Uganda.

Please read each statement and answer by ticking in the suitable category that best fits your opinion.

1= Strongly disagree (SD), 2 = Disagree (D), 3= Not Sure (NS), 4= Agree (A), 5= Strongly agree (SA)

Code	Reservation thresholds	1	2	3	4	5
RTH1	Introduction of reservation thresholds has increased the amount of tenders we win from government departments	1	2	3	4	5
RTH 2	The increased amount of tenders won has increased our revenue	1	2	3	4	5
RTH 3	We have been able to increase our staff salaries due to increased revenue	1	2	3	4	5
RTH 4	Introduction of reservation thresholds has increased bidding competition from other local firms	1	2	3	4	5
RTH 5	Increased competition has enabled us increase our innovations to enable us beat the competition	1	2	3	4	5
RTH 6	Increased innovation has enabled us improve our skills and knowledge in field of construction	1	2	3	4	5
RTH 7	Improved skills and knowledge have enabled us increase the volume of work we do in construction	1	2	3	4	5
RTH 8	We have hired more staff to cope up with increased amount of work	1	2	3	4	5
RTH 9	Increased amount of work has increased our investments in plant and equipment for construction	1	2	3	4	5
RTH 10	We can now pay more taxes to government	1	2	3	4	5

(II) CONTRACUAL CONDITIONS

The PPDA guidelines on reservation schemes also provide for contractual condition for which the foreign firms must comply with when awarded contract in respect to road works above 45 billion. 30% of the contract value is to be reserved for resident and national providers through subcontracting of sub works, supply of equipment, and materials. In view of this, kindly indicate the extent you agree with the following observations in respect to the effect of contractual conditions on local firm participation in road construction of Uganda.

Please read each statement and answer by ticking in the suitable category that best fits your opinion.

1= **Strongly disagree (SD)**, 2 = **Disagree (D)**, 3= **Not Sure (NS)**, 4= **Agree (A)**, 5= **Strongly agree (SA)**

	Contractual conditions	1	2	3	4	5
CC 1	The introduction of contractual conditions has enabled us to continuously work with foreign contractors	1	2	3	4	5
CC2	The introduction of contractual conditions has increased our volume of work through sub-contracting	1	2	3	4	5
CC3	The increased volume of work through subcontract has increased our revenue	1	2	3	4	5
CC4	The increased revenue has enabled us to increase our staff salaries	1	2	3	4	5
CC5	We have hired more staff to cope up with increased volume of work	1	2	3	4	5
CC6	Associating with internal firms through sub-contract has enabled knowledge transfer	1	2	3	4	5
CC7	Skills acquired through knowledge transfer has enabled us improve our operations	1	2	3	4	5
CC8	Improvement of our operations has significantly improved our cost of doing business	1	2	3	4	5
CC9	We have become competitive in the construction sector as a result of reduction of the cost of doing business	1	2	3	4	5
CC10	Our income tax to government has significantly increased as a result of increase in our business volume	1	2	3	4	5

SECTION C: LOCAL FIRM PARTICIPATION

Local firm participation under this means active involvement of local firm in the road construction projects. In view of this, kindly indicate the extent you agree with the following observations in respect to local firm participation in road construction of Uganda.

Please, tick each statement as it most suitably applies to your opinion

1= **Strongly disagree (SD)**, 2 = **Disagree (D)**, 3= **Not Sure (NS)**, 4= **Agree (A)**, 5= **Strongly agree (SA)**

Code	Local firm participation	1	2	3	4	5
LFP1	The increase in amount of tenders won has increased by a percentage of over 10% since the introduction of reservation thresholds.	1	2	3	4	5
LFP2	The increase in amount of local materials used has increased by a percentage of over 10% since the introduction of contractual conditions.	1	2	3	4	5
LFP 3	The increase in volume of work done has increased by a percentage of over 10% since the introduction of contractual conditions	1	2	3	4	5

**SECTION D: FACTORS HINDERING LOCAL FIRM PARTICIPATION DESPITE
EXISTENCE OF RESERVATION SCHEMES**

Please, tick each statement as it most suitably applies to your opinion

Code	Factors hindering local firms' participation	1	2	3	4	5
FHFP1	Lack of formal registration	1	2	3	4	5
FHFP2	Lack of knowledge of the available opportunities	1	2	3	4	5
FHFP3	Lack of tax compliance	1	2	3	4	5
FHFP4	Corruption in procurement process	1	2	3	4	5
FHFP5	Local firms lack plant and equipment	1	2	3	4	5
FHFP6	Inadequate financial resources discourage a firm to participate in road construction	1	2	3	4	5
FHFP7	Inadequate information about procurement process	1	2	3	4	5
FHFP8	The local firm don't have capacity to compete favourably in highly competitive public procurement contracts mainly due to inadequate expertise	1	2	3	4	5
FHFP9	Lack of awareness of procurement reforms and initiatives	1	2	3	4	5
FHFP10	High cost of bidding	1	2	3	4	5
FHFP11	Delayed payment					

THANKS FOR YOUR SUPPORT IN THIS STUDY.

APPENDIX 11: INTERVIEW GUIDE

RESERVATION SCHEMES AND LOCAL FIRM PARTICIPATION IN THE ROAD CONSTRUCTION OF UGANDA: A CASE OF LOCAL ROAD CONSTRUCTION FIRMS IN KAMPALA

Introduction

This interview guide intends to help the researcher to gather views from key informants about reservation schemes that would increase local firm participation in the road construction of Uganda

1. Has your company won construction tenders since the introduction of reservation thresholds?
2. Has your firm benefited from the introduction of reservation schemes?
3. Has your company worked as a sub-contractor in road construction?
4. What factors do you think are hindering local firm participation in road construction despite existence of reservation schemes?
5. How do you think these challenges can be solved?