ESTABLISHING WAYS OF DEVELOPING SUSTAINABLE SMALL AND MEDIUM ENTERPRISE CONTRACTORS IN ZAMBIA

BY

Andrew M'tewa

A Dissertation submitted to the University of Zambia in partial fulfillment of the requirements for the attainment of Master's Degree in Engineering Construction Management

The University of Zambia
Lusaka

2019

COPY RIGHT DECLARATION

DECLARATION

I hereby declare that the work presented in this dissertation is the result of my research work except to the extent indicated in the acknowledgements and references and that it has not previously been submitted for any degree at this or any other University.

Name: _____

Signed: _____

Date: _____

CANDIDATE

Name: _____

Signed: _____

Date: _____

SUPERVISOR

CERTIFICATE OF APPROVAL

This dissertation of Andrew M'tewa is approved as fulfilling the partial requirements for the award of the degree of Master of Engineering in Engineering Construction Management by the University of Zambia.

NAME **SIGNATURE**

Prof E. Munshifwa _____ _____

First Examiner

Dr F. Muleya _____ _____

Second Examiner

Dr B. Mwiya _____ _____

Third Examiner

G. Munakampe _____ _____

Chairperson Board of Examiners

ABSTRACT

The Zambian construction industry is comprised of more than 90 percent small and medium enterprise (SME) contractors who are faced with a myriad of constraints that affect their performance with regards to quality, cost and timely delivery of projects. The research was aimed at establishing ways of developing sustainable SME contractors in Zambia. Using a non-probability purposive sampling on industry stakeholders that included clients, consultants, financial institutions, regulators and SME contractors in grade 6 to 3, mixed methods involving 20 semi structured interviews and 75 questionnaires was used in the study. The results of the study established that SME contractors in Zambia were faced with various constraints which emanated from the business environment, the client and also from their own deficiencies. The study established that delayed payments was the highest ranked constraint among Zambian SME contractors. The measures that government had put in place which included: the 20 percent subcontracting policy; restriction of foreign contractors to grade 1 and 2; the Construction Finance Initiatives; preferential procurement regulations had minimal positive impact with regards to developing sustainable SME contractors in Zambia. The study established that for SME contractors to develop government had to take deliberate and well-coordinated measures to provide an enabling environment for their growth. This study established that the measures important in the development of SME contractors in Zambia were: provision of more efficient and decentralized payment procedures; provision of material or loan guarantees by contracting agencies to suppliers or banks; establishment of construction bank for SME contractors; provision of clearly defined subcontracting policies in the entire construction sector; provision of more training and advisory services; provision of tax incentives; increase access to equipment through hire purchase; provision of contractor development programmes; provision of well thought out tendering preferences; provision of mobilization allowances in contracts; lower retention monies and also provide contract splitting to help SME contractors easily access contracts.

Key words: contractors, constraints, development, SME, sustainable, Zambia

ACKNOWLEDGEMENTS

First and foremost, I wish to thank the almighty God for giving me the strength to undertake the study.

I would also want to extend my profound gratitude to my supervisor Dr Erastus Mwanaumo for his patience and professional guidance throughout the study. Your guidance was always spot on.

Further gratitude goes to my wife Annie and our two children for their support and for being there for me both spiritually and physically.

To everyone who took time off their busy schedules to attend to my questionnaires and interviews, I wish to say thank you very much for taking part in the study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

CEEC	Citizen Economic Empowerment Commission
CFI	Construction Finance Initiatives
DCED	Donor Committee for Enterprise Development
GDP	Gross Domestic Product
ILO	International Labour Organization
IPC	Interim Payment Certificate
MCTI	Ministry of Commerce, Trade and Industry
MOF	Ministry of Finance
MSME	Micro Small and Medium Enterprises
NCC	National Council for Construction
NRFA	National Road Fund Agency
NAMSSC	National Association for Medium and Small Scale Contractors
OECD	Organisation for Economic Corporation and Development
RDA	Road Development Agency
SED	Small Enterprise Development
SEDB	Small Enterprise Development Board
SID	Small Industries Development
SME	Small and Medium Scale Enterprise
SPSS	Statistical Package for Social Science
SSEC	Small Scale Emerging Contractors
ZOC	Zambian Owned Companies
ZDA	Zambia Development Agency

CHAPTER 1 INTRODUCTION

1.1 Background

Small and Medium Enterprises (SMEs) are considerable contributors to economic growth, employment creation and poverty alleviation. Small and Medium Enterprises are vital globally for example, in the United States of America (USA), one of the world‘s most economically influential countries, SMEs create 50 percent of private employment and in countries like China, Austria, and Canada, SMEs’ employment creation is above 50 percent (Davis, 2011). Small and medium enterprises contribute to a large part of the gross domestic product (GDP) of each country. This was supported by Ahiawodzi and Adade (2012) when they indicated that SMEs in Ghana account for 70 percent of GDP, and they make up 92 percent of businesses in the country. In South Africa, 97.5 percent of businesses are SMEs, and 70 percent of the manufacturing sector in Nigeria constitutes SMEs (Abor & Quartey, 2010). According to Ministry of Commerce, Trade and Industry (MCTI) (2007), SMEs are very instrumental for the development of an economy through for example creation of employment, increasing tax base for the country, improving incomes for the low earners among other benefits. This view is supported by Mahemba (2011) when he stated that SMEs are vehicles for stimulating economies of developing countries.

The construction industry of developing countries comprises mainly of SMEs and form an average of 90 percent of the market (Aniekwu, 2013; Liedholm & Mead, 1999; Thwala & Phaledi, 2009). The Zambian Construction industry is not different for instance in 2018 out of 7,619 registered contractors, 7,131 contractors representing 93.5 percent were local SME contractors in grade 6 to 3, 151contractors representing 2 percent were Zambian contractors in grade 2 and 1 with the foreign contractors all in grade 2 and 1 taking up the remaining 4.5 percent (NCC, 2018).

Ofori (2009) stated that the construction industry, by nature, has many peculiar problems and requirements. According to Mvubu and Thwala (2008), complexity and risks involved in the construction industry have led to enormous failures especially among SME contractors. Thwala and Phaladi (2009) also agreed to the existence of challenges that surround SME contractors when they summed up some of the challenges as: inadequate finance and inability to get credit from suppliers; inability to employ competent workers; poor pricing, tendering, and contract

documentation skills; poor mentoring; and fronting for established contractors; lack of entrepreneurial skills; lack of proper training; lack of resources for either large or complex construction work; lack of technical, financial, contractual, and managerial skills; and late payment for work done.

Like many developing countries in Southern Africa and Africa at large, the Zambian Construction Industry has its own share of the problems. According to Mwanawina and Mulungushi (2002), the Zambian economic and political environment has seen significant changes since 1991 when it returned to multi-party democracy. One of the changes was the liberalization of the economy from a controlled economy to a free market state which brought about increased competition from within the economy and the entrance of foreign players into the economy. National Council for Construction (2004) stated that despite the liberalization and privatisation, the industry continued to grapple with a number of problems such as inappropriate government policies, late payments, inadequate skills and lack of equipment. While privatisation and economic liberalization had managed to attract both local and international private investment in infrastructure, most of these projects had been undertaken by foreign construction companies.

According to Adams (1997), expatriate firms undertake 95 percent of civil engineering and 85 percent of building projects in Africa, leaving only 5 percent and 25 percent of civil engineering and building projects respectively for indigenous contractors. (Road Development Agency, 2015; National Road Fund Agency, 2015; and NCC, 2017) all had a similar view regarding foreigners commanding a large market share in the construction industry when they stated that more than 70 percent of the major contracts in Zambia were acquired by foreign contractors. Ministry of Works and Supply (2012) attributed the dominance of foreign contractors to deficiencies in the indigenous local contractors.

According to Aniekwu (2013), the construction industry is widely acclaimed as an engine for socio-economic development and therefore the development and growth of the local construction industry by the government should be viewed as economic and a strategic asset. Ofori et al., (2012) stated that the development and growth of construction businesses within the lower grades is a fundamental element for all countries as a strong SME base has the capacity to produce quality infrastructure.

Other researchers further stressed the need for growth of SMEs when they stated that sustained growth of SMEs comes with jobs and wealth creation, economic wellbeing, self-fulfilment and general improvement in quality of life (Bartik & Erickcek, 2014; Hussain et al., 2012).

Small and medium enterprise contractor development has been prioritized by many governments. Talking about South Africa, Hove (2016) stated that in the bid to bring about economic prosperity, development and creation of jobs for the disadvantaged people, the government had prioritized development of Small Scale Emerging Contractors (SSECs) as the vehicle towards achieving the same. One of the measures implemented by the South African government to develop SSEC included introduction of Emerging Contractor Development Program (ECDP) which comprised measures designed to help SSEC develop technical skills and management skills required to grow businesses (Hove, 2016). The Zambian government equally attaches great importance to the growth of SMEs in the country (Zambia Development Agency, 2018). The government of Zambia has tried to put in place measures to help in the development of SME contractors in Zambia. Some of these measures include: the introduction of the 20 percent subcontracting policy in the road sector a policy aimed at enhancing local contractor participation in the construction industry and thereby helping build capacity; the preference and reservation schemes as enshrined in the Citizens Economic Empowerment preferential regulations of 2011 and the procurement act No 12 of 2009; the introduction of Construction Finance Initiatives (CFI) in the road sector meant to help provide access of local contractors to finances and restriction of registration for foreigners to grade one (1) and two (2) only a measure meant to enable local contractors compete favourably amongst themselves for contracts that fell in the lower grades (National Assembly, 2015).

1.2 Problem statement

The Small and Medium Enterprise (SME) contractors in Zambia are faced with constraints that have impacted negatively on their performance thereby making them unable to compete favourably with their foreign counterparts. Foreign contractors average a meager 5 percent of the registered contractors in grade one (1) and two (2) leaving an average of 95 percent local contractors with SME contractors in grade 6 to

3 taking up an average of 93 percent (NCC, 2017). Even though foreign contractors average only 5 percent of the total registered, more than 70 percent of the major contracts are acquired by foreign contractors (RDA, 2015; NRFA 2015; NCC 2017). The dominance of foreign contractors can be attributed to deficiencies in the indigenous local contractors. Government has tried to put up measures to some extent to try and develop SME contractors in Zambia but the Zambian construction industry which comprises mainly of SME contractors still remains marginal and requires immediate redress if a sustainable Zambian construction industry is to be achieved. What then should be done to achieve a sustainable construction industry? A sustainable construction industry in this case implies having a cadre of contractors with the ability to participate competitively and undertake works effectively with continuous growth and performance to meet current and future needs of the construction industry. Much as there have been studies that have been done in the past to highlight some of the constraints that SME contractors face, as far as this study could establish, there has been no research that has been conducted to establish ways of developing sustainable SME contractors in Zambia. This study therefore endeavoured to establish ways of developing sustainable small and medium enterprise contractors in Zambia.

1.3 Research aim and objectives

1.3.1 Research Aim

The aim of the study was to establish ways of developing sustainable SME contractors in Zambia.

1.3.2 Research Objectives

In order to achieve the aim of the study, the following were the objectives of the research:

i) identify the constraints to contractor development in Zambia;
ii) establish impact of these constraints on performance of SME contractors;
iii) identify measures put in place by government to provide an enabling environment for the growth of SME contractors in Zambia;
iv) assess the impact of the current measures by government in place to provide an enabling environment for the growth of SME contractors in Zambia; and

v) recommend ways of developing sustainable SME contractors in Zambia

1.4 Research questions

In order to achieve the objectives of the study, the following were the research questions:

i) What are the constraints that affect SME contractors in Zambia?
ii) How have these constraints impacted their performance?
iii) What measures has government put in place to provide an enabling environment for the growth of SME contractors in Zambia?
iv) How have these measures impacted growth of SME contractors in Zambia?
v) What measures are needed to develop sustainable SME contractors in Zambia?

1.5 Significance of the study

The overall purpose was to establish ways of developing sustainable small and medium enterprise (SME) contractors that would compete favourably with bigger contractors and thereby contribute to national development.

1.6 Scope of the study

The study confined itself to the role the government must play to help develop sustainable SME contractors. Collection of data about SME contractors was confined to building and civil engineering contractors registered with NCC.

1.7 Summary of research methodology

In conducting this research, the study adopted a detailed literature review from previous works done within Zambia and other countries as a method for secondary data acquisition. Some of the reviewed sources of data were: Journal articles, conference papers, dissertations and books and the internet to some extent. In order to obtain primary data, mixed methods approach using interviews to obtain qualitative data was used and quantitative data was collected using closed ended questionnaires. Mixed method was used because the strengths of one method helped to overcome the weaknesses of the other and it also helped to add insights and understanding that might otherwise have been missed. Qualitative methods were used in the research to gain an understanding of underlying reasons, opinions, and

motivations and quantitative methods were used to provide more precise, numerical data that could be generalised.

1.8 Organization of the dissertation

The dissertation consists of five chapters:

Chapter 1 outlines the background, problem statement, aim and objectives of the study.

Chapter 2 lays a foundation of the study through the review of literature relevant to establishing ways of developing SME contractors in Zambia and other developing countries.

Chapter 3 highlights the various research methodologies and the justification for the method adopted for the study.

In *chapter 4* analysis of the results and discussion was provided.

Chapter 5 finally presents the conclusions, limitations and recommendations of the study.

1.9 Chapter summary

This chapter provided an introduction to the research topic regarding SME contractors, the chapter also highlighted the problem statement, the aim of the research and the objectives. It further briefly pointed out the significance of the study as well as the scope that guided the study. The next chapter presents the literature reviewed in the study.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

The previous chapter presented the introduction of the study. It outlined the background, problem statement and significance of the study. The aim and objectives of the study were also outlined. In order to have clear understanding of the topic, work that had been published by other scholars on the subject was reviewed in this chapter. This chapter reviews previous work done and relevant literature on the subject in more detail

2.2 Classification of SME contractors

Small and medium enterprises are defined differently in each country. Contractors can be distinguished from each other by variables such as the size of annual turnover, capacity and capability (Thwala and Mvubu, 2008). According to Chilipunde (2010), an SME contractor is a typical sole-proprietorship firm or, in many cases, a family-owned business with few foremen and mostly casual labour employed as needed. Shakantu et al., (2006) argued that the SME business sector consists of either family owned businesses employing very few people or self- employed people.

According to MCTI (2008), a small enterprises is any business enterprise registered with the registrar of companies and whose annual turnover is between one hundred and fifty one thousand kwacha and three hundred thousand kwacha rebased (K151,000 – K300,000) or US dollar equivalent (US$15,100-US$30000) and employing between eleven and fifty (11 – 50) persons. MCTI (2008) further stated that a medium enterprise is any business larger than a small enterprise registered with the registrar of companies whose annual turnover is between three hundred thousand and eight hundred thousand kwacha rebased (K300,000 - K800,000) or US dollar equivalent (US$30,000-US$-80,000) and employing between fifty one and one hundred (51-100) persons.

However, Kayanula and Quartey (2000) argued that there is no single, uniformly accepted definition of a small firm. They further argued that firms differ in their levels of capitalisation, sales and employment. Hence, definitions which employ measures of number of employees, turnover, profitability and net worth when applied to one sector, could lead to all firms being classified as small, while the same size

definition, when applied to a different sector, could lead to a different result. Researchers would have to use definitions for small firms which are more appropriate to their particular `target' group. This can be implied as an operational definition. For the purpose of this study, the definition given by (MCTI, 2008) for SME was used for SME contractors in this research.

2.3 Contribution of the construction industry to the Zambian Economy

Small and medium enterprises in Zambia and many other developing countries are perceived to be economic drivers as they reliably create employment opportunities for low-income poor people, thereby increasing financial inclusion. The SME sector is estimated to account for 97 percent of all businesses in Zambia (Liyanda, 2017). According to ZDA (2019), enhancing the development of SMEs cannot be over emphasized as they play an important role in employment creation and economic growth.

According to the Bank of Zambia (2007) Annual Report, construction is one sector that has continued to post good results over the recent past. A look at sectorial contribution of the construction to the real gross domestic product showed that the average GDP contribution from the construction industry had been increasing. Table 2.1 shows the average GDPs of various sectors at given intervals from 1965 to 2015

Table 2.1 Sectorial contribution to real GDP growth (average percentage)

Industry	**1965-1970**	**1971-1976**	**1977-1993**	**1994-1999**	**2000-2009**	**2010-2015**
Agriculture, forestry and fishing	13.7	10.4	16.3	24.6	17	9.2
Mining & quarry	33.3	32.6	8.9	6.3	8.7	9.2
manufacturing	9	11	21.6	9.7	9.4	8.1
Electricity, gas & water	1.4	2.5	3	3.5	2.6	2
Construction	5.4	7.2	3.7	7.8	10.4	9.9
Services	36.9	36.2	44.9	40.7	51.8	55.8

Source World Bank 2018

As of the year 2017, out of 6,266 registered contractors in Zambia, 92 percent represented SME contractors in grade 6 to 3, 2 percent represented local contractors from grade 2 and 1 and their foreign counterparts took about 4 percent in grade 2 and 1 (NCC, 2017).

The construction industry of Zambia comprising of mainly SME contractors in 2017 contributed to 4.9 percent of the total workforce in Zambia (Central Statistics Office, 2017). Table 2.2 shows the number and percentage distribution of employed persons by industry.

Table 2.2 Number and Percentage Distribution of Employed Persons by Industry

INDUSTRY	**TOTAL PERSONS EMPLOYED**	
	Number	**Percent**
Agriculture, forestry & fishing	768,605	25.87
Mining and quarry	58,007	1.95
manufacturing	233,721	7.86
Electricity, gas, steam, air conditioning supply	13,077	0.44
Water supply; sewage, waste management	9,300	0.31
Construction	145,211	4.90
Wholesale and retail trade; repair of motor vehicles, transport and trade	798,012	26.85
Accommodation & food service activities	112,100	3.77
Information and communication	57,247	1.93
Financial and insurance activities	12,493	0.42
Real estate activities	23,003	0.77
Professional, scientific & technical activities	32,039	1.08
Administrative and support service activities	25,693	0.86
Public administration and defense; compulsory social security	68,241	2.30
Education	189,677	6.38
Human health & social work activities	68,270	2.30
Arts, entertainment & recreation	3,252	0.11
Other service activities	81,535	2.74
Activities of households as employers	192,921	6.49
Activities of extraterritorial organizations & bodies	2,300	0.08
Total	**2,971,170**	**100**

Source CSO 2017

The construction industry also has linkages with other industries. Ofori (2012, p.5) summarises the linkages of the construction industry to other industries when he states that:

> *The construction industry has many complex linkages to the other sectors of the economy, and can stimulate activities in these sectors. For example, construction uses materials and components made by the manufacturing sector. These inputs are supplied by the commerce and services sector. Construction also relies on financial services, as well as the legal, accountancy and other relevant professional services from this sector. It must also be noted that, at one time or another, enterprises in all sectors will require some construction. Thus, the linkage is two-way; construction affects the other sectors, and vice-versa.*

2.4 Constraints hindering development of SME contractors

According to Mayer et al., (1995) a constraint is defined as a constraining condition, agency, or force that limits the systems' performance in a given context/environment. Constraints that SME contractors face can be said to emanate from three sources: from the business environment in which they operate; from the client with government being the major client and also from deficiencies and shortfalls of the contractor himself (Adams, 1995).

The following are the constraints hindering growth of SME contractors in developing countries and Zambia inclusive.

2.4.1 Constraints emanating from the business environment

i) Difficulty accessing finances and credit

Small and medium enterprises use internal sources of funding when they are established but as the needs increase, there is a need for an external source of funding to support the growth. Fatoki and Garwe (2010) stated that lack of financial support is the second highest contributor after education and training that causes SMEs to fail. According to NCC (2004), SME contractors face challenges in accessing credit and finance facilities. Money lending institutions consider contractors (in general) to be risky clientele, probably exacerbated by the publicly held perception that their biggest client the government does not pay on time. The interest rates on the finance or credit facilities that do exist are therefore prohibitive (NCC 2004). Thwala and Mvubu (2008) also agreed when they pointed out that due to lack of collateral, any contractor that gets credit from banks is subjected to high interest and financial risk

management charges that make contracts unprofitable. However talking of collateral requirements, a report by ILO (1997), indicated that in Sierra Leone, the Roads Authority waived the requirement for collateral but insisted that the contractor arranged for a "guarantor's certificate" to ensure repayment of the loan. The contractors were generally able to arrange such certificates through the informal circuit. Generally the high risk nature of construction, as well as perceptions of banking institutions that construction SMEs are a high credit risk, means that it is very difficult for construction SMEs to access finance (Uriyo, *et al.,* 2004).

Adam (1997) stated that limited access to finances tends to have spill over effect in that it prevents contractors from satisfying the financial requirements (e.g. bid and performance bonds) needed to win major contracts often awarded to their foreign counterparts. This limited access to finances besides preventing satisfactory furnishing of financial requirements also tends to further increase hurdles to overcome on top of the already existing exorbitant performance bond demands on the contractor as illustrated by Lazarus (2005) when he reported that the contractor's financing scheme, "Fundisa", included a maximum of R3 million in project finance and R3 million in performance bond per contractor. This becomes a barrier as SME contractors are unable to raise R3 million as a performance bond.

ii) Difficulty accessing plant, equipment and spares

According to (Laryea, 2010), the challenge of lack of funding to contractors tends to affect their ability to possess equipment and most of the equipment in their possession is over 20-25 years old. This results in frequent and occasional breakdown of the equipment which impedes the progress of work. In some cases, the spare parts are not available to buy, because the machines are obsolete (Laryea, 2010). Adam (1995) stated that construction plant, equipment and spares are mostly imported, and hence very expensive and therefore a lack of capital means that indigenous contractors cannot afford the basic equipment and plant required to undertake major projects.NCC (2004) also agreed when they stated that small scale contractors often find it difficult to gain access to equipment. This class of contractors also finds leasing and purchasing as not feasible options due to costs and collateral required.

Robert et al., (2006) talking about equipment stated that in an industry that depends so heavily on working capital, taking on significant current debt to purchase equipment can hamper the company's ability to obtain a bond. A contractor, who purchases several hundred thousand dollars of equipment and finances through a short -term loan, has just reduced its working capital by the entire cost of the equipment. The company needed the equipment to perform upcoming contracts. However, because of the structure of the financing the contractor has affected its bonding capacity.

According to a study conducted by Laryea (2010) on challenges and opportunities facing contractors in Ghana, the interviews with contractors revealed that most contractors do not have equipment and have to hire. The study further revealed that in 2005/06 the government of Ghana tried to go a step further in supporting contractors through an equipment supply scheme managed by the National Investment Bank (NIB). The equipment was given to about 40 Ghanaian contractors to be paid for in installments. However the scheme did not quite succeed as some contractors could not pay for the equipment not that they did not want to pay, but most of them did not even win any work in the first place to be able to pay for the equipment.

iii) Failure to meet collateral requirements

National Assembly (2015) stated that Financial Institutions had collateral requirements that were difficult for local contractors to meet in order to secure credit facilities. However, National Assembly (2015) further stated that there was potential in Zambia for local contractors to grow as what was required to unlock the potential was for the banks to soften their stringent collateral requirements so that finance was made available in a timely manner and at affordable rates.

iv) Lack of continuous work opportunities

According to NCC (2004), there are not enough projects on an ongoing basis to ensure commercial viability for the contractors. This causes problems of underutilization of plant and equipment, difficulty of retaining good staff. The problem of lack of work opportunities for SME contractors was also highlighted by Thwala and Mofokeng (2012) when a study on problems facing SME Contractors in

the Free State Province of South Africa revealed that not getting work opportunities was the greatest contributor to causes of contractors to fail. Thwala and Mofokeng (2012) further stated that failure to get work on a regular basis meant most of the SME construction companies in the Free State Province at that time were not healthy as a construction company needs to participate meaningfully in the available construction job market if it is to make profits.

v) Bribery and corruption

Shakantu and Chiocha (2009) stated that corruption is perceived to be present to some degree in most of the major industries. However, in construction, there is a higher level of anecdotal perception of the prevalence of corruption than in other industries.The Longman's Dictionary of Contemporary English (1995) describes corruption as dishonest, illegal or immoral behavior especially from someone with power. According to Goel and Nelson (2008) corruption is use of public office for private gains. Chiocha (2006) stated that the construction industry has its own characteristic methods of project procurement which are different from other industries. Contractors obtain their work through open or selected tendering or by negotiation. These processes may also prove to be competitive insofar as contractors fear that their chances of being awarded a particular contract are almost zero. It is at this point that ideas of corrupting the tender-award/decision-making parties arise.

According to Macwan'gi et al., (2017), the construction sector in Zambia is riddled with bribery, extortion and fraud. This agreed with the observations made by Mukumbwa and Muya (2012) when they stated that corruption was prevalent in the Zambian construction industry.

vi) High interest rates

According to National Assembly (2015), high interest rates that currently ranged between twenty (20) to thirty (30) percent, were a major hindrance to the growth of local contractors. In light of the high interest rates, National Assembly (2015) further pointed out on the need for government to come up with a construction bank which would have affordable interest rates for small contractors.

vii) Uncertainties with respect to supplies and prices of materials

According to Adams (1995) in a study on Indigenous Contractors' Perceptions of the Constraints on Contractors' Performance and Development Programmes required in Nigeria, some of the factors that contribute to irregular supply of materials and fluctuations in prices include: inadequacy of locally manufactured materials in terms of quality and quantity, the high cost of domestic manufactures arising from high wages, the inadequate supply of basic services such as electricity, transport, communications and water supply.

viii) Political interference

According to Uriyo et al.,(2004), small scale contractors cited political interference as a major obstacle to fair and transparent award of work opportunities. Politicians at times have preference for certain contractors irrespective of the competitive factors (prices, capability, experience etc). Uriyo et al.,(2004) further stated that Political interference was also present as many politicians who had established themselves as contractors had connections and were able to influence the award process.

ix) Regulation

According to World Bank (2012), regulatory framework impacts on the general propensity of SMEs to upgrade and can also explain differences between countries. Regulation can have both positive and negative effects on firm investments and likelihood of upgrading. On one hand, regulation provides entrepreneurs with more security in both their business-to-business and their business-to-state relations. For example, regulation is needed to protect intellectual and other property, and for contract enforcement and dispute resolution. Regulation according to Loewe et al. (2007) also means the public has clear rules for dealing with private entrepreneurs that ensures transparency in government procedures and equal treatment of firms both large and small. However regulation may raise the costs of doing business in terms of both time and money (World Bank 2010; OECD 2010). World Bank (2012) talking about regulation in relation to business environment argued that when less time and money and fewer procedures are needed for dealing with construction permits, registering property, paying taxes and closing a business, the business environment is more favorable for SME owners.

x) Unfair Competition

Businesses do not operate alone, as there are competitors in the market (Louw & Venter, 2015).When there is a shortage of work, the large expatriate contractors cover their overheads by competing with the small contractors a phenomenon called "**down-plunge**" to secure contracts, which would normally not be of interest to them. Although they can hardly be expected to profit from such works due to their higher fixed costs in relation to the typical small scale contractor, they consider even partial cover of overheads advantageous. This tendency damages the prospects and stagnates growth of the small scale contractors (NCC, 2004). Dlungwana and Rwelamila (2004) seemed to agree with NCC (2004) when they suggested that procurement systems should include contractor development models that are tailored in a way that allows some form of preferential treatment to local contractors in order for them to establish, behind temporary protective barriers, a certain level of competency until they can compete in the open market. This limited form of temporary protection will enable local contractors develop their capacity to grow and compete. Failure to do this will exacerbate the status quo and completely destroy local contractors, with grave consequences for local economies.

2.4.2 Constraints emanating from the client

i) Late payments

NCC (2004) stated that contractors suffer from inconsistent cash-flow problems and are often forced to delay or put off works due to delays in payments or at times even the non-payment of their dues, with the government being the main defaulter in this respect. The issue of delay in payments by the government was identified as probably one of the major stumbling blocks that has impeded contractors' growth. Delays in payment later had consequent adverse effects on the contractor's cash flow which then affected the operations of the contractor, ultimately hindering a project from being delivered as required (NCC, 2004). Adams (1995) stated that Public clients were often the worst culprits and fear of reprisals, particularly losing clients' goodwill for future job opportunities, often inhibits contractors from taking legal steps to recover outstanding money.

According to Baloyi and Bekker (2011), late payments is a challenge in construction business which leads to contractors halting work unless payment for completed work has been processed after the agreed date. Ofori (1991) stated that delays in payments impacted on the contractor's cash flow which then affected the operations of the contractor. The observation by ofori (1991) regarding delayed payments affecting cash flow was also pointed out by Badu et al.,(2012) when they stated that congenital payment delay particularly by the major client in the industry posts serious cash flow challenges to contractors especially SME contractors and impacts negatively on the growth of their businesses.Thwala and Mvubu (2008) talking about late payments stated that a contractor may do everything right, his work may be of good quality but if the government doesn't pay on time, the contractor may end up owing the bank and defaulting.

ii) Lack of standard contract documentation

Inappropriate contract documents has been identified as one of the most common problems affecting the operation of small contractors in developing countries as most clients either public or private do not use a standard set of contract documents and building plans and the methods of construction are also different which often confuses the SME contractors (Ofori, 1991).This observation made by Ofori (1991) was also made by Adams (1995) when he stated that lack of standard conditions and terms of contract was a major cause of confusion in the Nigerian construction industry.

2.4.3 Constraints emanating from the deficiencies and shortfalls of the contractor himself

i) Lack of effective management skills

According to Hillebrandt (2000), absence of effective management during their initial stages is one of the major causes of business failure for small and medium sized contractors and remains as one of the scarcest resources. Croswell and McCutchen (2001) stated that owners tend to manage their businesses themselves as a measure of reducing operational costs and business funds were put to personal use and thus used in settling domestic issues. This had a negative impact on profitability and sustainability. Crosswell and McCutchen, (2001) further stated that some owners/managers employ family members simply because of kinship relations. In

some cases, these have turned out to be undisciplined and ineffectual, a factor that has led to eventual and sometimes rapid failure of businesses. Poor record keeping is also a cause for start-up business failure. In most cases, this is not only due to the low priority attached by new and fresh entrepreneurs, but also lack of basic business management skills. Most business people, therefore, end up losing track of their daily transactions and cannot account for their expenses and profits at the end of the month (Wijewardena & Tibbis, 1999).

ii) Lack of effective technical skills

According to NCC (2004), lack of adequately qualified staff to effectively execute works has hampered the performance of small-scale contractors. This affects both those contractors who at the start do not have adequately qualified staff to execute works, and also those who have been formally trained, but who have been forced to stretch their staff owing to attrition, where they cannot retain their staff or where a few have more than one project ongoing, thus designating non-trained staff in other projects. According to Ofori (1991), low levels of technical and managerial skills of contractors is a major problem facing the construction industry, particularly in developing countries. As a result, they lack the ability to provide reliable tenders and yet most often are unable to afford the fees of professional advisers.

iii) Document Preparation

According to National assembly (2015), local contractors had difficulties in preparing responsive bids making it difficult to win tenders and therefore there was need to enhance the capacity of local contractors in preparing tender documents through continuous professional development.

2.4 Contractor development

Many developing countries engage foreign contractors to do large construction works due to deficiencies in the local contractors (Ofori, 1991). Adams (1993) cited in (Eyiah, & Cook, 2003) stated however that there was need to consider developing local contractors as that would increase competition among themselves, make increased use of local materials and resources and also create job opportunity for local professionals.

Contractor development refers to the process of identifying and removing the constraints affecting development and performance of construction firms (Construction industry development board, 2011). Contractor development, though not a generic term, has been used extensively in the literature to refer to the application of management and economic principles to remove the constraints affecting the development of small and medium scale construction firms in developing countries. Kulemeka, Kululanga and Morton (2015) reported that the enabling process for the development of contractors includes facilitating their access to the necessary resources to start and sustain their businesses and the removal of barriers to their entry into the market and to their growth. There is a consensus that SME contractors need supporting to enhance their effective participation in the construction industry. However, the impact of programmes has been marginal (Ofori, 1991).

According to Construction industry development board (2011), contractor development comprises of three components:

i) contractor learner ship-which incorporates development of emerging contractors or start ups;

ii) enterprise development - in which the enterprises start growing, developing markets for their services, expand their workforce, expand their areas of operation, accumulate capital for future growth, expand their plant and equipment and business and technical systems; and

iii) performance improvement - in which the established enterprise introduces best practice systems for health and safety, quality management, environmental management, etc. in order to improve their performance.

Construction industry development board (2011) further stated that there are a number of key factors that need to be in place for successful contractor development:

- Continuous and profitable work opportunities to contractors
- Procurement strategies and development mechanism to target learners and contractors with continuity of work.
- Appropriate contract conditions addressing supportive practices regarding sureties, Good practice elements that guarantees, retention policies, etc.

- Prompt payment of contractors for work completed satisfactorily.
- Appropriate contract management and quality assurance
- Contractors have access to finances for working capital.
- Contractors have appropriate business and technical capability and capacity.
- Contractors have access to an appropriately skilled workforce.
- Contractors have access to cost effective, quality plant and equipment.
- Contractors have access to information and technology.

2.5 Measures currently being undertaken by government to support SME growth in Zambia

2.5.1 Acts and policies in place to support SMEs in general

The Zambian government recognised the challenges that the SME sector in general was facing as far back as 1981 thereby initiating the pro SME policies through the Small Industries Development (SID) Act of 1981 which made an attempt to enhance the effectiveness of the sector's contribution to the national economy by establishing the Small Enterprise Development Organisation (SIDO) which was among other things established to carter for financial needs of small scale companies (MOF, 2002; FSD Zambia 2009). In support of the SID Act, provisions were made to the Fourth National Development Plan of 1989 to provide infrastructure for operations of MSMEs, promote access to credit by MSMEs with growth potential and to improve production capacities of MSMEs with the view to increase incomes and employment (MCTI, 2008). In 1996 SIDO was transformed into small enterprises development board (SEDB) through the 1996 Small Enterprise Development (SED) Act, and in 2006 it was amalgamated into the Zambia Development Agency (ZDA) under the ZDA Act No. 11 of 2006. The ZDA Act of 2006 provides legal provision for the development of the MSME sector in Zambia and is the principal legislation under which the MSME development policy shall operate. According to Phiri (2016) other acts and policies that were used to help foster growth of SMEs in general included:

i) The Industrial, Commercial and Trade Policy in 1994.

ii) Small Enterprises Development Act of 1996.

iii) Zambia Development Agency Act of 2006.

iv) Citizen Economic Empowerment Act of 2006.

v) The Micro, Small and Medium Enterprise Development Policy Act of 2009

Phiri (2016) however argued that despite the many efforts by government to try and help SMEs to grow so that they can contribute meaningfully to the economy, SMEs have, however, struggled to graduate and have remained stagnant.

2.5.2 Measures currently put in place by government to provide an enabling environment to support SME contractors development in Zambia

According to Thwala and Mvubu (2008), the initiative to support the SMEs has mainly been the direct or indirect responsibility of governments. A similar view was echoed by Kulemeka et al.,(2015) when they stated that small and medium sized contractors would remain unsustainable and their performance unsatisfactory without the intervention of the government. Thwala et al., (2018) in a study titled 'Small-Medium Sized Contractors' Growth in Cape Coast Metropolis' established that SME contractors' impediment to growth in Cape Coast Metropolis had been attributed mainly to lack of government support and delay in payment for work done and that there was need for the government support and immediate response to payment of contractors, in order to shape and improve the overall performance of SME contractors towards their growth. Talking about local contractors in Zambia, Phiri (2016) seemed to agree with other researchers when he stated that the trend of local contractors lacking proper equipment and experiencing difficulties in accessing finances would continue unless government took deliberate measures to help the local contractors.

For small and medium-scale contractors, creating an enabling environment includes removal of barriers to their entry into the market and to their growth and sustainability. Part of the enabling process may be to offer the small- and medium-scale contractors (SMCs) support, which will facilitate their access to the necessary resources to start and sustain their business (Sibanda, 1999). According to Construction Industry Development Board (2011), some of the ways to establish an enabling environment include: facilitating access to finance for contractors; facilitating prompt payment of contractors; provision of appropriate contracting conditions which will support contractor development; and facilitating mechanisms that promote skills development.

The following are some of the measures put in place by the government of Zambia to try and create an enabling environment for SME contractor development.

i) The 20 percent subcontracting policy

Many countries are encouraging the promotion of SMEs as they strive to industrialise and bring about economic development for their people. Governments in this regard, can come up with policies one of which is subcontracting (Humphrey and Schmitz, 1995).

Government of the republic of Zambia in July 2012, passed a policy that a minimum of 20 percent on all road contracts above K30 million awarded by the Road Development Agency would be executed by Zambian owned companies in line with the shareholding structure specified in the Citizens Economic Empowerment Act of 2006 whose overall goal was to contribute to sustainable economic development, by building capacity in Zambian owned companies.

The objectives of the 20 percent subcontracting policies were:

- empower local contractors;
- create jobs for Zambian citizens;
- create sustainable local contracting capacity; and
- upgrade local contractors from grade six through to one

Talking about the 20 percent subcontracting policy, Matakala *et al.*, (2015) argued that the policy was not achieving its intended purpose and SME contractors would not grow as intended as they were more interested in receiving money than doing the work which prompted some of the foreign contractors to simply pay them off and do the work themselves. Similar views were expressed by Phiri (2016) in a study titled 'an analysis of the twenty percent subcontracting policy in the Zambian construction sector: its efficacy in developing capacities of local contractors' when he pointed out that the twenty percent (20%) subcontracting policy in its current form could not achieve its intended purpose due to the following: the policy only dealt with road sector, there were weaknesses in the implementation of the policy through ineffective areas of subcontractor engagement, work allocation, content and context of subcontractors' bills of quantities and contract agreements and that it was difficult to

grow capacity of local contractors using the 20 percent subcontracting policy as main contractors were not interested in building capacities of local contractors due to lack of incentives. Furthermore Phiri (2016) argued that the policy had no clear guidelines and modalities on the implementation.

ii) Construction finance initiatives

According to RDA (2013), government introduced the Construction Finance Initiative (CFI) in the road sector at the beginning of 2013 a policy aimed at assisting the small and medium scale contractor's access finances from banks. National Road Fund Agency (2017) stated that CFI as an initiative was meant to help build capacity for local SME contractors in Zambia as most of them had challenges accessing facilities such as bid bonds, advance guarantee and performance bonds due to lack of collateral demanded by most financial institutions.

The following were the main objectives of CFI:

i) To facilitate SMEs' easier access to advance bank guarantees, bid bonds, performance bonds from financial institutions, without and/or with minimal security;

ii) To facilitate SMEs' ease access to equipment and construction materials without and/or with minimal security; and

iii) Have a coordinated public private capacity building initiative for SMEs in the Road Sector through project management partnerships among big contractors, financial institutions, Road Sector on managing

In actualising the CFIs, RDA (2013) stated that memoranda of understanding were signed with various Zambian banks for the so purpose of trying to assist contractors in the road sector have access to finances through the SME invoice discounting and provision of working capital from banks. The SME Invoice discount would allow the SME contractors who are already under contracts with RDA borrow funds from financial institutions against their Interim payment certificates (IPC) for work already completed but not yet paid as collateral before the National Road Fund Agency (NRFA) paid the IPC.

iii) Preference and reservation schemes

According to the Donor Committee for Enterprise Development (DCED) (2017), SMEs may receive preferential support through public procurement due to their prevalence in nearly all economies and the benefits from engaging with them and may also be deserving of preferential treatment due to the unique barriers they face to participate in the procurement process, particularly in comparison to large companies.

To many SMEs, lot sizes remain the greatest barrier to their ability to participate in public Procurement (Morand, 2003). According to Asian Development Bank (ADB)(2012), Many contracts are simply too large for an SME to be able to meet the government's needs on their own, despite being capable of providing a similarly competitive good or service at a smaller scale. Unbundling large centralized procurement contracts into more localized contracts can enhance the ability of SMEs to compete.

Small and medium enterprises can be supported through set asides (ADB, 2012).Under a set aside essentially a quota or a certain percentage of designated government procurement contracts or total spending is reserved for a targeted category of bidders that meet the preferential qualification criteria, in this case achieving SME status and/or being owned by a woman.(ADB , 2012) The critical aspect of this approach is that there is a segregation of competition amongst targeted firms, i.e. SMEs can only compete against each other. According to World Bank Groups (2016), Algeria, Cote d'Ivoire, Dominican Republic, India, and Morocco each use a set aside around 20 percent of the total value of government contracts to SMEs. That percentage increases to 25 percent in Kenya and Angola and 40 percent in Taiwan, China.

The Citizen Empowerment Commission Act No 9 of 2006 and the Public procurement act No 12 of 2008 provide for preference and reservation schemes in public procurement with the objective of trying to enhance meaningful participation of citizen-influenced, citizen-empowered and citizen-owned companies in public procurement (National Assembly, 2015).

In those regulations, a state institution was mandated in evaluating a bid, to adjust the bid price in order to facilitate preferential evaluation of a bid as follows:

i) For a citizen-influenced company by four percent, where a citizen influenced company meant ‘a company where five to twenty-five percent of its equity was owned by citizens and in which citizens had significant control of the management of the company, and was licensed to conduct business in Zambia’;
ii) For a citizen-empowered company by eight percent, where a citizen-empowered company meant ‘a company where twenty five-fifty percent equity was owned by citizens and licensed to conduct business in Zambia’; and
iii) For a citizen-owned company, by twelve percent where a citizen-owned company meant ‘where at least fifty point one percent equity was owned by citizens and in which citizens had significant control of the management of the company, and was licensed to conduct business in Zambia.

Under reservation schemes, with respect to works, authorities were mandated to reserve public procurements for citizen-influenced company, citizen-empowered company or citizen-owned company with estimated values as follows:

i) Building and construction not exceeding K20million rebased or US dollar equivalent US$ 2million
ii) Civil and road works not exceeding K30million rebased or US dollar equivalent US$ 3million

Matakala et al., (2015) however noted that much as the preference and reservation schemes at first glance appear positive and meant to benefit indigenous local contractors, the three ‘citizens’ companies in the Public Procurement act and Citizen economic empowerment act allows a foreign company to simply provide a citizen with a minimal shareholding and qualify to become a ‘citizen’ company which implied that in many instances, the reserved projects still ended up being given to foreign companies. Matakala et al., (2015) further stated that there was need to reassess the reservation scheme provided for by the Statutory Instrument if it was to benefit SME contractors.

iv) Restriction of registration for foreign contractors

According to NCC (2018), all foreign contractors are restricted to register in grades 1 and 2 and Class A (in the case of Specialist Contractors), subject to meeting the registration requirements. This was meant to enable the local contractors to compete favourably amongst themselves for contracts that fell in the lower grades (National assembly 2015).

2.6 Stakeholders involved in developing SME contractors in Zambia

i) National association of medium and small scale contractors

Most writers on the construction industry of developing countries stress the need for institutional building and strengthening (Miles & Neale, 1991). According to Msita (1993), professional institutions and trade associations can play a key role in the development of the industry by:

i) seeking the interests and the welfare of their members

ii) mount programmes for continuous development of their members

iii) present their concerns to government and other relevant bodies

iv) act as a forum for sharing important ideas and experiences

In Zambia, National Association for Medium and Small Scale Contractors (NAMSSC) is the only national representative for the micro, small and medium scale contractors in Zambia which was registered under Section 7 (1) of the Societies act, CAP 119 of the Laws of Zambia on 11th April 2001 and is currently one of the only two (2) associations in Zambia recognized by the NCC act No. 13 of 2003 as representing contractors' interests – and has one (1) nominated representative on the board of directors of the NCC.

It seeks to promote, solicit and lobby for contractors' interests in the construction sector by engaging the government, funding agencies, and other cooperating partners for purposes of contractor development or capacity building (Simumba, 2017).

The objectives include the following:

i) to provide and sustain a platform for members to address issues of common interest geared towards achieving the goal of promoting and development of a fair and competitive construction industry;

ii) to lobby and advocate for an enabling procurement and contracting environment;

iii) to initiate and lobby for training of its members in various construction related courses;

iv) to solicit for support for members' capacity building programmes;

v) to promote cordial working relationship between members and their customers;

vi) to ensure that goods and services provided by members are of highest standards and quality and not a danger to the general public; and

vii) to promote and contribute to accountability and transparency in the construction industry;

ii) Financial institutions

SMEs face challenges and therefore require support from Financial Services Providers (FSPs) like Banks and Micro Finance Institutions to grow their portfolios (Liyanda, 2017).

Zambian government attaches great importance to the growth of SMEs in the country. In line with government policy, ZDA had put in place various interventions to facilitate the growth of small enterprises. The Agency had signed Memoranda of Understanding with various banks and other financial institutions such as Bank ABC, Madison Finance and Mizuho Financial Group among others to facilitate access to finance for small and medium enterprises (ZDA, 2019).

iii) Mentors

Watermeyer, Jacquet and Noyana (2001) refer to a mentor as being a trusted and respected advisor, who, based on their knowledge gained through practical experience, is able to guide and advise prioritised contractors in the areas in which they need to improve their competencies to develop their technical, managerial, administrative, commercial and business skills.According to Public works (2001),

mentorship in South Africa has been identified as a means of developing capacity in new entrants to the construction sector and overcoming business impediments in existing enterprises that have arisen as a result of legacies of apartheid. It aims to achieve this goal through coordinated and controlled transfer of knowledge and experience with the help of mentors who are responsible for giving reliable and honest advice to the person being mentored as well as transfer knowledge and experience. Talking about transfer of knowledge that can come with mentorship, McCutcheon and Croswell (2001) stated that small contractor development and employment intensive construction has mainly been a public sector initiative. This in turn seems to be oblivious of the level of expertise that is inherent in the private sector contracting and a fusion of this through the use of a project manager or engineering consultant would aid increased success in the small contractor development.

iv) International organizations

International bodies have a key role to play in the effort to improve the performance of local contractors in developing countries. They can provide financial and technical support and assistance to governments and agencies tasked with construction industry development (Habitat, 1996). In Zambia NCC in partnership with the International Labour Organization (ILO) and Zambia sugar company conducted training and practical demonstrations for selected SME contractors in the construction of low volume sealed roads and cobblestone paving using labour based technology (NCC, 2018).

2.7 Registration of Contractors under NCC

According to NCC (2017), the NCC Act of 2003 prohibits any person from carrying out works as a contractor without registration. Registration of contractors is done throughout the year to ensure that the construction industry is developed, promoted and to ensure that data is provided on the size and distribution of contractors in the industry. According to NCC (2017), registration of contractors since 2005 has been on the increase with 4,959 contractors registered from the period 2005 to 2017.

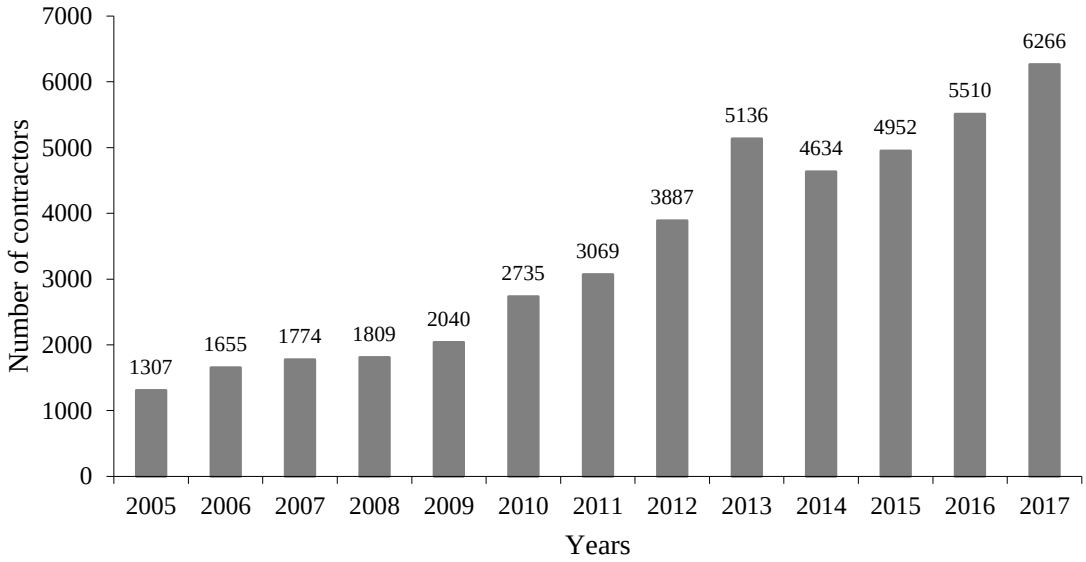

Figure 2.1 shows the registration trends of contractors from 2005 to 2017

Source: NCC 2017

In 2018, NCC issued 7,619 registration certificates indicating an increase of 21.5 percent compared to 2016 when a total of 6,266 registrations were recorded (NCC, 2018).Figure 2.2 below shows the distribution of contractor registrations by grade and category.

Table 2.3: Contractor registration as at 30th December 2018 by grade and category

GRADE	**CLASSIFICATION AND CATEGORISATION**								
	Z.O.C VS Foreign	B	C	E	M	ME	R	S-A	S-B	TOTALS
1	Z.O.C	23	15	5	5	1	24	1	18	73
	Foreign	66	45	32	31	4	54	3	0	232
	Total	89	60	37	36	5	78			305
2	Z.O.C	23	12	14	3	0	26			78
	Foreign	44	18	14	17	1	11			105
	Total	67	30	28	20	1	37			183
3		51	15	21	2	1	33			123
4		270	57	58	27	2	131			545
5		560	149	128	41	11	422			1311
6		2225	904	417	435	154	1306			5130
S-Class										22
Total		**3262**	**904**	**689**	**561**	**174**	**2007**	**4**	**18**	**7619**

Z.O.C: Zambian Owned Companies; B:Building; C: Civil; E: Electrical; M: Mining; ME: Mechanical Engineering; R: Roads; S Special categories

Source NCC: 2018

Much as the registration of local contractors has continued to be over 90 percent as compared to their foreign counterparts, the foreign contractors have continued to dominate in terms of total market share (NCC, 2017, NCC, 2018).Table 2.4 shows the value of projects inspected in 2017.

Table 2.4 Overall value of projects undertaken in 2017

Nationality of contractor	Value of projects (ZMK)	Percentage
Zambian	10,394,714,847.44	23.89
Foreign	32,780,420,891.22	75.35
Local/Foreign	330,074,324.71	0.76
Grand total	**43,505,210,063.37**	**100**

Source NCC 2017

2.8 Laws that regulate or have an impact on small and medium enterprise contractors in Zambia

According to Matakala et al., (2015), there were many laws that either regulate or have an impact on the delivery of quality infrastructure in Zambia. Matakala et al., (2015) however stated that the provisions that directly impact on the work and activities of SME contractors in grade 3, 4, 5 and 6 were as follows:

i) Registration with and regulation by the National Council for Construction as stipulated in the National Council for Construction Act No.13 of 2003

ii) Planning and the urban and regional planners' Act No. 4 of 2011

iii) Housing and the housing (statutory and improvement) Act, CAP 194 of the laws of Zambia

iv) Roads and the public roads Act No. 12 of 2002

v) Public procurement Act No. 12 of 2008

vi) Citizens' economic empowerment Act No. 9 of 2006

vii) Occupational health and safety Act No. 36 of 2010

viii) Workers' compensation Act No. 10 of 1999, CAP 271 of the Laws of Zambia

ix) Public health Act No. 22 of 1995, CAP 295 of the Laws of Zambia

x) The environment and the environmental management Act No. 11 of 2011

xi) Labour matters and the immigration Act no. 18 of 2010.

2.9 Part of the reviewed literature related to the study

A series of studies have been done related to this study. Figure 2-5 shows the content analysis of part of the reviewed literature related to developing sustainable small and medium enterprise contractors in Zambia and across the world, the stakeholders important in SME contractor development, the NCC registration system.

Table 2-5 Content analysis of part of the literature reviewed

No	Author & year	Title of study	Methodology	Conclusions/Comments
1	Abor, J. and Quartey, P. (2010)	Issues in SME development in Ghana and South Africa.	Quantitative and qualitative approach using questionnaires and interviews. Literature review to collect secondary data	The study observed that SMEs constitute a vital element of the development process, and their contributions in terms of production, employment and income in developing countries is widely recognized. Notwithstanding there cognition, the development of SMEs is always constrained by a number of factors such as, lack of access to appropriate technology, limited access to international markets, the existence of laws, regulations and rules that impede the development of the sector; weak institutional capacity and lack of management skills and training. However, access to finance remains the greatest concern for the majority of SME.
2	Ahiawodzi and Adade, (2012)	Access to credit and growth of small and medium scale enterprises in the Ho Municipality of Ghana	Quantitative and qualitative approach using questionnaires and interviews Literature review to collect secondary data	Results from the study showed that, access to credit, increase in total current investment, start- up capital and annual turnover had significant positive effect on the growth of SMEs in manufacturing sector using employment level of the business as prosy for growth.
3	Badu, E., Edwards, D. J., and Owusu-Manu, D.(2012)	Trade credit and supply delivery in the Ghanaian construction industry: Analysis of Vendors interaction with small to medium scale enterprises	Quantitative approach using questionnaires Literature review to collect secondary data	The study established that trade policy was absent within the trade credit market in Ghana; this poses a potential threat to trade credit exchange and its development.

No	Author and year	Title of Study	Methodology	Conclusion/comments
4	Chilipunde, C.(2010).	Constraints and Challenges faced by Small, Medium and Micro Enterprise Contractors in Malawi	Quantitative approach using questionnaires Literature review to collect secondary data	The study established that SME contractors in Malawi face financial problems due to lack of collateral. Lack of technical problems, business skills among SME contractors was also present. The study further recommended that there was need for training in the area of business management and technical skills and that supportive legislature that creates and enabling environment for growth of SME contractors was needed.
5	Hussain, I., Farooq, Z and Akhtar, W. (2012)	SMEs development and failure avoidance in developing countries through public private partnership	Quantitative approach using questionnaires Literature review	The study found that main constraints faced by small entrepreneurs in Pakistan were lack of finance, low human resource capabilities, and technological capabilities. The study suggested public private partnership (PPP) as future strategy for SMEs' development in developing countries.
6	Kulemeka et al (2015)	Critical Factors Inhibiting Performance of Small and Medium Scale Contractors in Sub-Saharan Region: A Case for Malawi	Quantitative approach using questionnaires. Literature review to collect secondary data	The study found that the main inhibitors to performance of small and medium sized contractors were economic in nature. The study concluded that small and medium sized contractors will remain unsustainable and their performance unsatisfactory without the intervention of the government. In order to address the challenges faced by the small and medium sized contractors in Malawi, it is critical for the government to continuously review policies with regard to small scale contractor development programmes to ensure that it contributes to the success of small contractors.
7	Mukumbwa, B. and M. Muya (2012).	Ethics in the construction industry in Zambia	Quantitative approach using questionnaires, qualitative approach using interviews, case studies.	The study results indicated that unethical practices were prevalent in all phases of construction projects in Zambia. Unethical practices such as political interference, bribery, corruption, lack of confidentiality, collusion, uncompetitive tendering, certification of poor quality works, fabrication of test results at expense of the quality, lack of integrity, negligence and covering up project failure, among others, were identified

No	Author and year	Title of study	Methodology	Conclusion/comments
8	Shakantu, W. and Chiocha.W (2009).	Corruption in the construction industry: the case of Malawi	Qualitative approach using interviews Literature review	The study found out that corruption is perceived to be present to some degree in most of the major industries. However, in construction, there is a higher level of anecdotal perception of the prevalence of corruption than in other industries.
9	Thwala, W. and Mbuvu (2008)	Current challenges and problems facing small and medium size contractors in Swaziland	Quantitative approach using questionnaires. Literature review to collect secondary data	The study found that small and medium size contractors in Swaziland were relatively underdeveloped, mainly constrained by limited access and high cost of capital and weak support programmes from government. It established that there was also lack of skills. The study further established that the most important deciding factors in the development of small contractors in Swaziland was to address the issue of access to finance, shortage of skills and adequate support from government was to be a priority.
10	Thwala, W.D. and Mofokeng (2012)	An Exploratory Study of Problems Facing Small and Medium Sized Contractors in the Free State Province of South Africa.	Quantitative and qualitative approaches using questionnaires and interviews. Literature review to collect secondary data	Financial factors were found to be amongst the leading causes of company failures. The study also established that delay in payments from the client to the contractor affected the company's cash flow. The study also established that it was of vital importance for construction company to put proper cost and accounting systems in place because it was where the companies' finances are directed.
11	Thwala, W.D.,Mustapha, Z. and Aigbavboa, C.(2018)	Small-Medium Sized Contractors' Growth in Cape Coast Metropolis	Quantitative approach using questionnaires Literature review	The study established that SME contractors' impediment to growth in Cape Coast Metropolis had been attributed mainly to lack of government support and delay in payment for work done and further recommended that there was need for government support and immediate response to payment of contractors, in order to shape and improve the overall performance of SME contractors towards their growth.

2.10 Chapter summary

This chapter presented a review of literature on developing sustainable SME contractors. It reviewed literature on the classification of SMEs, contribution of construction sector to the economy, constraints that SME contractors face, measures that government has put in place to develop SME contractors in Zambia and the stakeholders important in the development of SME contractors. The next chapter discusses the research methodology and research design adopted in the study.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter presented reviewed literature on challenges faced by SME contractors, the current measures being undertaken by government in promoting SME contractors, contractor development, stakeholders in developing sustainable SME contractors and the laws that affect construction SMEs in Zambia. This chapter presents the methodology used to execute the research in this dissertation. The chapter also describes sampling techniques used, data collection methods and the data analysis tools employed.

3.2 Research methodology

Research methodology concerns the way in which researchers proceed to solve problems (Buys, 2002). Fellows and Liu (1997) define research methodology as the principles and procedures of logical thought process which are applied to a scientific investigation. According to Kothari (2004), research methodology is an approach to systematically solve a research problem. It can be understood as a science of studying how research is done. Kothari (2004) further stated that methodology describes the steps taken by the researcher to study the research problem and the justification. It describes the research design, the techniques and methods.

In this research, mixed methods approach using interviews to obtain qualitative data was used and quantitative data was collected using closed ended questionnaires. Mixed method was used because the strengths of one method helped to overcome the weaknesses of the other and it also helped to add insights and understanding that might otherwise have been missed. Qualitative methods were used in the research to gain an understanding of underlying reasons, opinions, and motivations and quantitative methods were used to provide more precise, numerical data that could be generalised.

3.3 Research design

Research design essentially refers to the plan or organization of scientific investigation. It shows how the study is to be carried out, where the data comes from, what sort of data gathering techniques are used, and how the information is to be analyzed. A research design is the arrangement of conditions for data collection and

analysis in way that uncovers relevant information for the research in an economic and effective manner. Research design is important because it enables the smooth sailing of the various research processes to be conducted (Kothari, 2004).

The research used mixed methods design that involved both the qualitative and quantitative approaches. Qualitative methods helped in collecting data regarding underlying reasons and opinions from SME contractors. Qualitative approach enabled this researcher understand the context in which events occurred in order to interpret the findings accurately and also gave an opportunity to the researcher to examine and make clarifications. Quantitative data helped provide precise data on SME contractors that was used to generalise. Figure 3.1 illustrates the frame work by which the research was conducted.

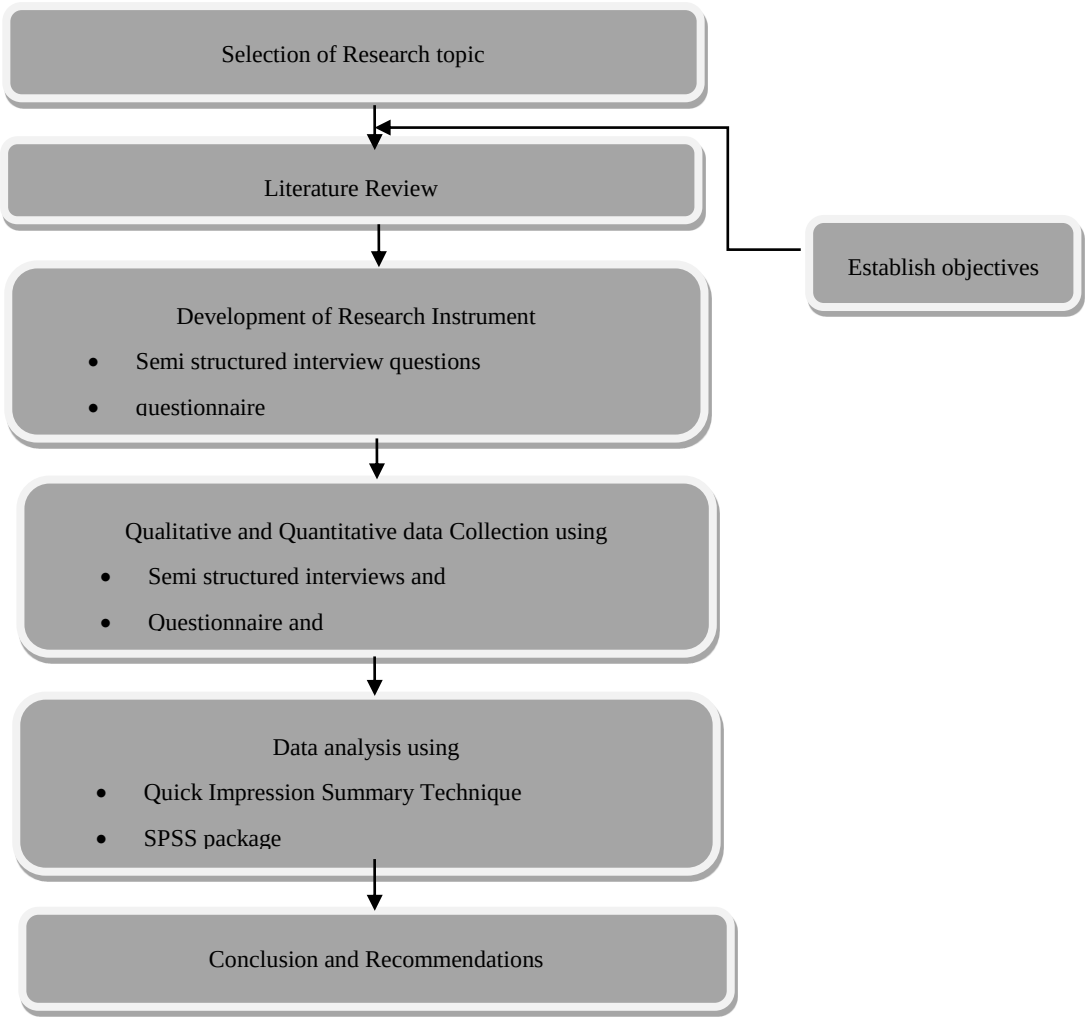

Figure 3.1 *Research design framework*

3.4 Study population

According to Castillo (2009), population refers to the entire group of individuals or objects. Kombo and Tromp (2006) agreed with Castillo (2009) when they defined population as a group of individuals, objects or items from which samples are taken for measurement. In this study, the target group was drawn from contractors, clients, consultants, industry regulators and SME contractor associations who had interacted and were linked to operations of SME contractors in Zambian construction industry. Clients included technical persons working for government ministries that were involved in building, civil, road work such as the Road Development Agency, Ministry of Works and Supply, Ministry of Education, Ministry of Local Government and Housing, and National Road Fund Agency being a funding agency. Consultants were drawn from member firms of the Association of Consulting Engineers whereas contractors were drawn from organisations registered with the National Council for Construction in category B, C and R and grades 6 to 3. Regulatory bodies included National council for construction (NCC).

3.5 Sampling

Sampling is the process of selecting a sample from the study population to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the population (Kumar, 2011). A sample is a part of the total population that represents this population meaning, sampling allows a representative section of a population to be studied and the results extrapolated back to the population as a whole (Kothari, 2004). There are a wide variety of sampling methods that can be used in research. These can be classified into two major groups: random/probability sampling designs and non-random/non-probability sampling.

a) Probability sampling

This is a type of sampling in which each element in a population has equal and non-zero chance of being included. In probability sampling the choice of one element is not dependent upon the choice of another element in the sampling therefore the selection or rejection of one element does not affect the inclusion or exclusion of

another. Some of the popular random sampling designs are as follows (Kothari, 2004).

- simple random sampling-randomly selecting an item
- systematic random sampling-selecting every item on the list
- stratified random sampling – dividing the population into sub-populations, then sample the sub-populations using simple random sampling;
- multistage sampling – complex form of cluster sampling whereby two or more levels of units are embedded one in the other;
- cluster sampling – dividing the population into clusters of homogeneous units, then study all units of clusters randomly selected; and
- area sampling – cluster sampling where the primary sampling unit represents a cluster of units based on geographic area.

b) Non-probability sampling

In this case, the probability of selecting an element from the population is not equal and can even be zero chance of being included. Most of the probability sampling techniques include an element of subjective judgement (Saunders *et al.,* 2012). The following are some of the popular non-probability sampling designs (Kumar, 2011):

- quota sampling – elements are selected from a location convenient to researcher, and whenever a person with a visible relevant characteristic is seen that person is asked to participate in the study;
- accidental sampling – similar quota sampling but different in the sense that quota sampling attempts to include people possessing an obvious characteristic while accidental sampling makes no such attempt;
- judgmental sampling or purposive sampling – using own judgment to select those people who are likely to have the required information and are willing to share it;
- expert sampling – similar to judgmental sampling however respondents must be known experts in the area of interest; and
- snowball sampling – selecting a sample using networks.

For this study, purposive sampling was used on account of the researcher's judgment on who would provide best information to achieve the objectives of the research. In this research 40 SME contractors, 25 consultants, 20 clients, 5 financial institutions and 5 participants from industry regulator were targeted as participants in both interviews and questionnaire survey.

3.6 Sample size determination

According to Saunders et al., (2012), the size of the sample in non-probability sampling, apart from the quota sampling, is ambiguous and there are no rules. However, Saunders et al., (2012) stated that a logical relationship between the sample selection technique, the purpose and focus of the research is very important. This means that the sample size is dependent on the research questions and the objectives. Saunders et al. (2012) further went on to give guidance of sample sizes for different types of study as shown in table 3.1.

Table 3.1: Minimum non-probability sample size

Nature of study	Minimum sample size
Semi structured/In-depth interviews	5-25
Ethnographic	35-36
Grounded theory	20-35
Considering a homogenous population	4-12
Considering a heterogeneous population	12-30

Source: Saunders et al. (2012)

For this study based on the guidance provided in Table 3.1, a sample size of 20 for interviews and 75 for the questionnaires was considered adequate considering the cost and time factor involved in carrying out the study.

3.7 Data collection

Research involves the collection of data. There are two types of data that a researcher can collect: primary data and secondary data. Primary data are those which are collected first-hand and for the first time, and consequently they are original in character. Secondary data, alternatively, are those which have already been collected

by other people and have already been passed through the statistical process (Kothari, 2004).

i) Secondary data

In this study collection of secondary data involved the study of relevant previous studies in the area of constraints that SME contractors face, ways of developing them and other related topics. Literature review intended to achieve the following objectives:

- to identify the problems that have been gathered by other researches;
- to have an in-depth understanding of how these problems have affected the contractors;
- to assess the various interventions that have been put in place to help growth of SME contractors in Zambia;
- to understand where various government interventions have failed;
- identify approaches to research design and methodology; and
- Help suggest the future direction for the study.
- Understand the knowledge gaps in the areas of SME contractor growth

The sources that were used for the relevant literature were: books, journals, magazines, conference proceedings, newspapers as well as the internet to some extent.

ii) Primary data

Primary research is where a researcher collects data first-hand, using collection methods such as observation, interviews and questionnaire. Therefore, primary data are those which are collected afresh and for the first time by the researcher, thus happen to be original in nature. The following are some of the common methods used in primary research (Kumar, 2011):

- observation;
- interview; and
- questionnaire.

a) Observations

Observation is a method where the researcher watches and listens to an interaction or phenomenon as it takes place in a purposeful, systematic and selective manner (Wellington, 2015). It involves carefully taking notes and recording the event or occurrences of interest, then analysing the information in an appropriate manner to achieve set objectives. There are two types of observation: participant observation and non-participant observation.

i) Participant observation

In participant observation, the researcher is part of the participants. The researcher gets involved in the activities of the group, create an affiliation with group members, after gaining their consent, the researcher keenly observes the situation, interaction, site or phenomenon (Kumar, 2011).

ii) Non-participant observation

This is when the observer observes as a detached emissary without any attempt on his part to experience through participation what others feel. The researcher does not get involved in the activities of the group however they remain a passive observer, watching and listening to activities and drawing conclusions from this (Kothari, 2004).

In this research collection of primary data through observations was not used.

b) Interviews

Interviews are oral interactions where oral questions are presented to the respondent to elicit an oral response from the interviewee (Wilkinson and Birmingham, 2003). There are four popular types of interviews used in research these are structured interviews, unstructured interviews, semi structured interviews and focus group interviews (Dawson, 2007).

i) Structured interviews

Structured interviews involve the researcher having written down, fixed questions which are asked to interviewees. Each respondent is asked the same series of questions which often have limited set of response categories. This method ensures a

quick interview and easy comparison of responses. It does not require the development of rapport between interviewer and interviewee, and consistent data can be obtained that can be compared across a number of respondents (Dawson, 2007).

ii) **Unstructured interviews**

Here there is no structured interview guide even though the interviewer possesses a clear plan in mind regarding the focus and goal of the interview. The interviewer builds a rapport with the respondents, getting respondents to open-up and express themselves in their own way. The questions asked are open-ended and responses are not restricted and usually provide in-depth data (Wellington, 2015).

iii) Semi-structured interviews

Here the interviewer and respondents engage in a formal interview. Semi structured interviews incorporate a list of questions and topics that need to be covered during the conversation however topical trajectories in the conversation may stray from the guide when further probing is required (Wellington, 2015).

iv) Focus group interviews

These are interviews where several respondents are interviewed together (Wellington, 2015). Focus groups are moderated by a group leader and are generally used to collect data on a specific topic. The participants in the interviews are purposively selected, although not necessarily a representative sample of a specific population. Participants in this type of research are, therefore, selected on the criteria that they would have a relevant contribution to the topic of discussion (Rabiee, 2004).

In this research semi structured interviews were conducted.Interviews were conducted on 5 clients, 1 industry regulator, 1 SME contractor association, 1 financial institution 3 consultants and 5 SME contractors prior to questionnaire surveys. The interviews were aimed at obtaining preliminary data that helped enhance the questionnaire survey.

c) Questionnaire survey

There are two types of questionnaires:

- Self-administered questionnaire which are posted to the respondent and returned completed; and
- Administered questionnaires which are delivered by the interviewer.

This method has its merits and demerits when used in a survey. Its advantages include:

- it can be less expensive than interviews i.e. when one takes self-administered questionnaires, they are less expensive;
- it permits or allow for anonymity that can result in more honesty responses;
- it does not require research assistants; and
- questionnaires eliminate bias due to phrasing because questions are phrased and framed the same way for all respondents.

In this research the self-administered questionnaire was adopted as the main research instrument based on the advantages that a representative sample would be realized with little time or costs. The method allowed most stakeholders in the Zambian construction sector to make their contribution. The respondents were assured of anonymity which helped them to be honest in their answers. Three questionnaires were sent to respondents as a pretest to obtain comments which might have been difficult to understand and also helped determine time of completing. Walliman (2001) recommends that questions should be pre-tested on a small population or pilot study. The approved questionnaires were sent via email, posted or hand delivered to targeted stakeholders in the industry which included 19 clients, 30 contractors, 20 consultants, 3 financial institutions and 3 participants from industry regulator. Questionnaires contained closed ended questions. Closed ended are advantageous in that answers can be recorded quickly and analysis is easy.

3.8 Data analysis tools

Quantitative data which was collected was analysed using SPSS (statistical package for the social science) program. SPSS is a Windows-based program that can handle

large data. It can further use the coded data to provide analysed data in the form of tables and graphs.

Qualitative Data was analysed using a quick Impression Summary Technique. Quick Impression Summary Technique which involves summarising key findings and noting the frequent responses from respondents; explanation; and interpretation and conclusion on the subject matter was chosen as it is efficient and has the ability to provide the required information which was useful in formulating the questionnaire.

3.9 Ethical considerations

In achieving the objectives of the study information which was collected from respondents was used solely for the purposes of the study. Participants were informed as to the nature and purpose of the study, and they provided their voluntary consent to participate. Personal information on participants was only seen by the researcher, participants were further assured of anonymity and confidentiality regarding any information they gave towards the research and in that regard participants were not required to give their personal details. Data was collected and analysed in a professional manner and the findings were scrutinized and interpreted with objectivity and results made available to participants for those who so wished.

3.10 Chapter summary

This chapter presented information on how data was collected and analysed in order to address the objectives of the investigation. In this regard, the chapter covered the research methodology, research design and a description of the data collection and data analysis tools employed. The chapter further provided information on the sampling method used in the research. The next chapter presented the data analysis and results of the study.

CHAPTER4 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

The previous chapter outlined the methodology for carrying out the research and generate data reported for this dissertation. It also discussed the research design, sample size, data collection and data analysis tools used in the research. This chapter presents the data analysis and results. The first part presents information collected from interviews, whereas the second part presents the results and analysis of the questionnaire survey.

4.2 Interview data and analysis

Semi-structured interviews were conducted between May 2019 and June 2019. The interviews were scheduled for 20 different construction stake holders who included: construction industry regulators, clients, contractors, consultants and financial institutions with considerable experience in the construction industry. The purpose of the interviews was to obtain in-depth understanding of the constraints to contractor development, impact of those constraints on performance of contractors, impact of the measures taken by government on the development of SME contractors and finally measures that should be undertaken to develop SME contractors in Zambia.

4.2.1 Profile of Interviewees.

Sixteen (16) respondents who included 5 clients, 1 industry regulator, 1 SME Contractor Association,1 financial institution, 3 consultants and 3 SME contractors too part in the interview out of the 20 targeted interviewees. The other 4 were not available due to other commitments. Thirty eight percent (38 %) of the interviewees had between 3 to 5years of experience in the industry, 31 percent had between 6 to 10 years, 19 percent had between 10 to 15years and only 12 percent of the interviewees had 15years and above in the construction industry. From the group of 16 interviewees, only 8 were in management positions with 5 in top management positions and 3 in middle management. The level of experience of the interviewees provided assurance as well as confidence with respect to the information given. Figure 4.1 shows the experience of the respondents in the construction industry.

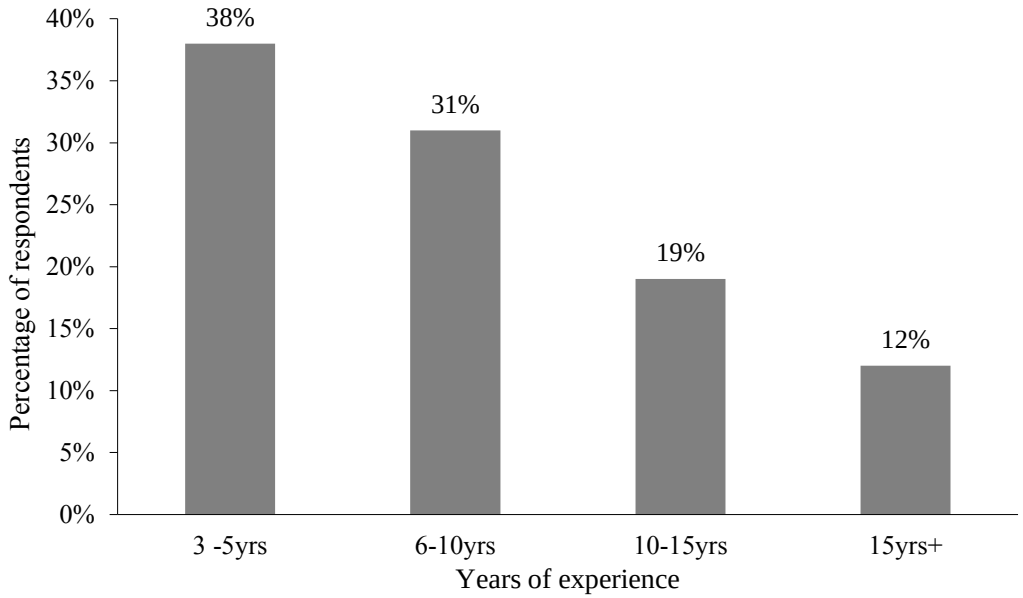

Figure 4-1 Percentage breakdown by respondent's years of experience in the construction industry

4.2.2 Benefits of being registered with NCC

Interviewees were asked on the benefits of a contractor being registered with NCC, all respondents gave similar answers on the benefits of being registered with NCC with slight differences arising from the way they expressed themselves. The following benefits were given by respondents:

- Registration with NCC gives contractors an opportunity to participate in tenders both public and private where NCC registration is one of the requirements;
- contractors registered under NCC do enjoy operating freely as compared to those not registered as they are recognised as formally registered;
- Contractors registered with NCC stand a chance of growing and developing as NCC sometimes does come up with training programs for registered contractors.

4.2.3 Effect of restriction of foreign contractors to NCC grade 1 and 2 on development of SME contractors

When asked on whether restriction of foreign contractors to NCC grade 1 and 2 had helped in the development of local contractors in Zambia, 56 percent of the respondents argued that it had not helped with 44 percent of the respondents stating that it had helped in the development. Figure 4.2 shows the effect of restriction of foreign contractors to G1 and G2 on development of local contractors.

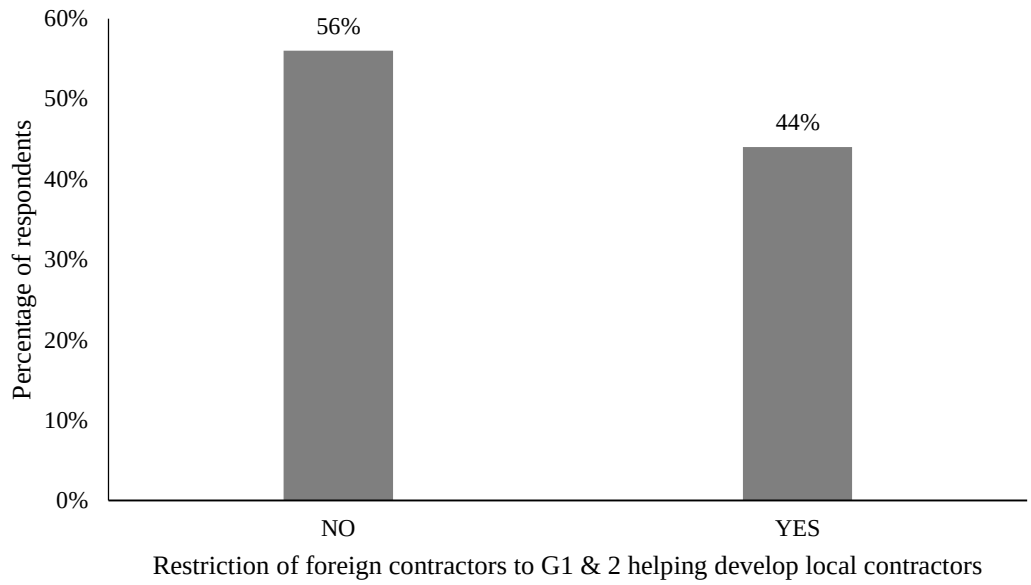

Figure 4-2 Percentage breakdown of Restriction of Foreign contractors to G1&2 having developed local contractors

The respondents who were of the view that the restriction of foreign contractors to NCC G1 and G2 had not helped in the development stated that the grades where SME contractors are found only had less economic value projects.

4.2.4 Lack of technical and management skills by SME contractors

All the interviewees affirmed when asked whether there was lack of technical and management skills by SME contractors in the Zambian construction industry.

When asked on the impact of lack of management and technical skills by SME contractors on their development, some of the respondents stated that SME contractors are unable to execute works to the required quality and standard as thy resort to cheap labor. Some of the respondents stated that lack of technical skills in the industry had contributed to the sub-standard works from SMEs. This agreed with the observation made by NCC (2004) when they stated that lack of adequately qualified staff to effectively execute works had hampered the performance of small-scale contractors.

Some interviewees stated that the growth of any organization requires an effective management system be it human resource management, financial management or material/machine management. The absence of such an effective management system

would result in inappropriate use of valuable resources thereby hampering the growth of SME contractors

4.2.5 Difficulty accessing finances

Hundred percent of the interviewees when asked if there was difficulty in accessing finances by SME contractors in Zambia affirmed that there was.

Respondents when further asked how difficulty in accessing finances affected performance of SME contractors in Zambia stated that it made it difficult for SME contractors to purchase proper equipment and also affected their ability to meet some of the contractual requirements such as bid bonds and performance bonds.

When asked on what government needed to do to assist SME contractors to access finances, interviewees gave the following responses: government should engage financial institutions to lower rending rates; government should set up a construction bank where performing contractors and those with viable projects can access finances. Some of the interviewees also stated that for those SME contractors who manage to secure contracts, government should be providing guarantees to financial institutions on behalf of SME contractors as most of them were unable to access finances from these institutions due to failure to meet collateral requirements as demanded by financial institutions.

4.2.6 Late payments

Interviewees were asked if there were late payments in the Zambian construction industry to which 100 percent affirmed that there was the problem of late payments.

When asked on the impact of late payments on performance of SME contractors, respondents stated that due to late payments from government as the biggest client, lending institutions such as banks are reluctant to lend finances to SME contractors as they are considered as a risky clientele. Some of interviewees stated that late payments hampers the timely delivery of projects and leads to SME contractors abandoning work. These impacts as given by the respondents confirm the findings of (Baloyi & Bekker, 2011; Ofori, 1991).

Interviewees were further asked on how the problem of late payments could be addressed and the following were their responses: government being the biggest

client should reduce on the amount of works being procured most of which are commenced without properly planning where resources would come from and instead stick to procuring works which are budgeted for and for which funds are readily available, there is need to decentralize the payment systems as approval processes for interim payments for example take too long even where funds may be available. Some of the respondents pointed to the need to standardize contract documents to include payment of interest to SME contractors in the event of late payments something which was not in existence.

4.2.7 Difficulty accessing plant, equipment and spare parts

When asked on whether SME contractors had difficulties accessing proper equipment, 14 interviewees affirmed that SME contractors in Zambia had difficulties accessing proper equipment with only 2 interviewees stating that SME contractors did not have difficulties accessing equipment. The findings agreed with NCC (2004) when they stated that small scale contractors often find it difficult to gain access to equipment. Figure 4.3 shows the responses of the respondents.

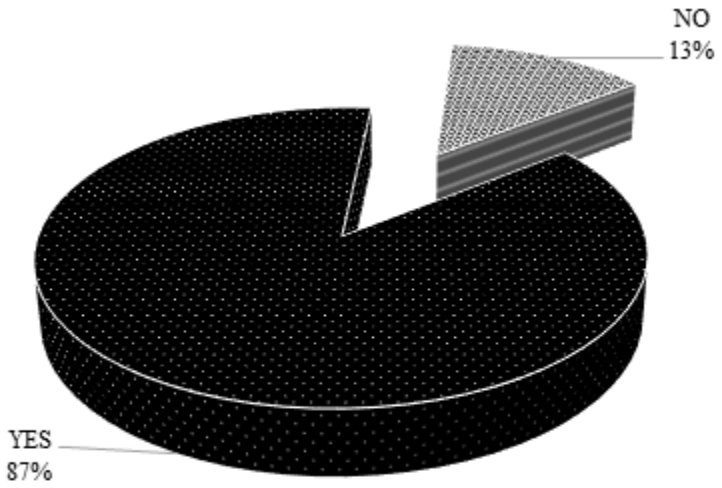

Figure 4-3 Difficulty accessing equipment

When asked how difficulty in accessing proper equipment affected SME contractors, respondents stated that difficulty accessing proper equipment leads to SME contractors improvising thereby using wrong methods of construction and subsequently compromising on quality and timely delivery of projects. This leads to reputational damage on the part of the contractor. Some respondents also stated that

not using proper equipment on site leads to accidents as safety tends to be compromised.

Respondents on what can be done to help SME contractors have access to proper equipment stated that the government needed to come up with schemes that can allow SME contractors access equipment on hire purchase.

4.2.8 Effect of the twenty percent (20%) subcontracting policy on development of SME contractors in Zambia

Respondents were asked on the effect that the 20 percent subcontracting policy passed in 2012 has had on SME contractors with regards to achieving the objectives for which the policy was created. Two (2) respondents said that the policy had achieved its objectives and 14 respondents argued that the policy did not achieve its intended objectives. The responses of the respondents are as shown in figure 4-4.

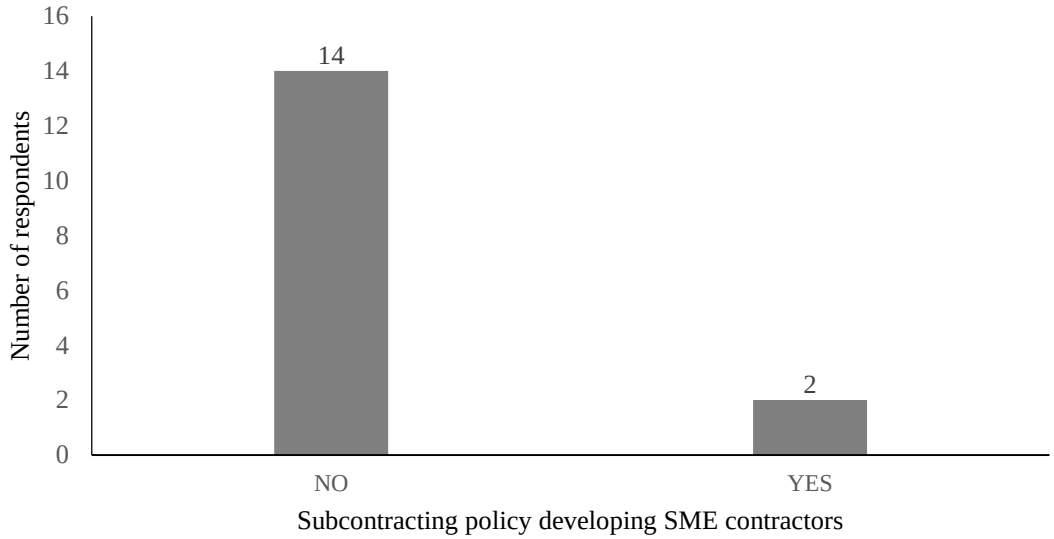

Figure 4.4 Respondent's breakdown of whether the 20% subcontracting policy having developed SME contractor

The interviewees who stated that the policy had not achieved its intended objectives were asked what was needed to ensure that the policy achieves its intended purpose. The following views were given by the interviewees: there is need to strengthen the monitoring mechanisms seeing in some cases what was subcontracted was even far less than the stipulated 20 percent; there is need for the policy to be included in the tender documents at the tendering stage so that both the main contractor and subcontractor can all participate at the bidding stage; respondents also strongly

emphasised the need to turn the policy into law so that there is adherence as the law would state punitive measures for defaulters.

4.2.9 Adherence to CEE preferential treatment regulations

Interviewees were asked on whether there has been adherence to the Citizen Economic Empowerment (CEE) preferential treatment contained in the CEE procurement regulation of 2011 in a bid to empower local contractors which states that 'state institutions may in evaluating a bid, adjust the bid price in order to facilitate preferential evaluation of a bid as follows: 4 percent for citizen influenced, 8 percent for citizen empowered and 12 percent for citizen owned companies'. Thirty eight (38) percent responded that there was adherence with 62 percent stating that there was no adherence. Figure 4-5 shows the responses from the interviewees.

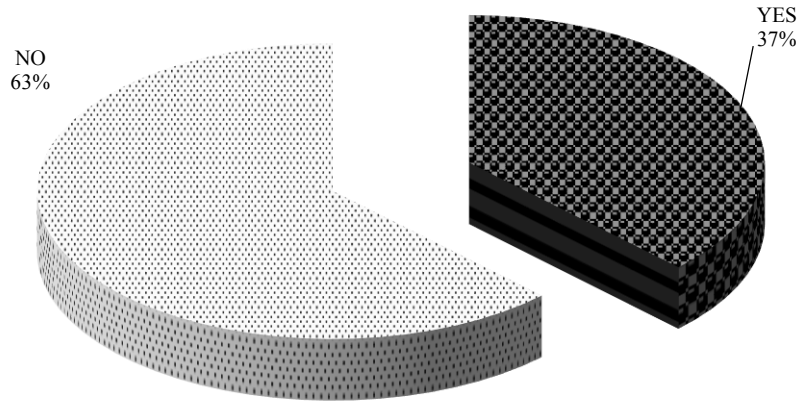

Figure 4-5 Adherence to CEEC preferential procurement regulations

The respondents when asked what should be done to ensure adherence stated that there was need for Citizen Economic Empowerment Commission (CEEC) to work hand in hand with Zambia Public Procurement Authority (ZPPA) to monitor public procurement systems to ensure there is adherence.

4.2.10 Deliberate measures in place to promote development of SME contractors.

Respondents when asked what deliberate measures they were aware of which had been put in place to promote development of SME contractors mentioned the following:

i) The 20 percent mandatory subcontracting policy

ii) Restriction of foreign contractors to grade 1 and 2

iii) The CEEC preferential procurement

iv) The CEEC reservation schemes

v) The construction finance initiatives (CFIs)

Figure 4.6 shows the responses from the respondents on the measures they knew which were in existence to promote SME contractors in Zambia.

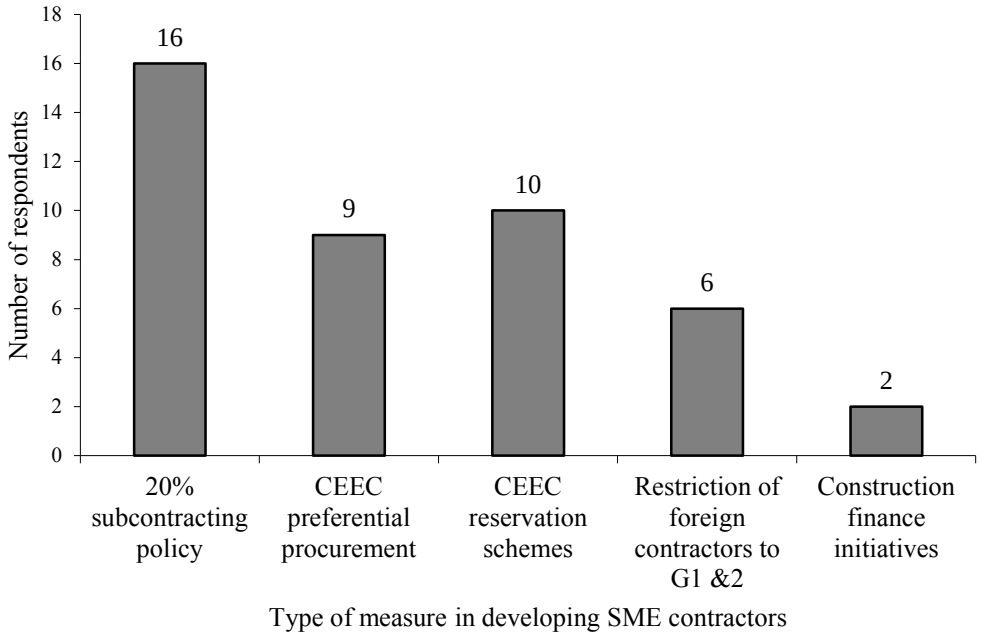

Figure 4-6 Different measures in place to promote development of SME contractors

When the respondents were asked on how the measures they mentioned which were in place had impacted on the development of SME contractors all stated that the positive impact on the development was minimal. Talking about the 20 percent subcontracting policy, 14 respondents were of the view that the policy had failed to achieve the intended objectives as there was lack of clear implementation modalities and lack of effective monitoring mechanisms in place.

On the CEEC reservation schemes, 5 of the respondents stated that the reservation scheme had failed to help in empowering local contractors with jobs to a larger extent. Respondents argued that it is easy for foreign contractors to still have projects in the reserved thresholds as all they need to do is to team up with local contractors

with minimal shareholding and qualify for citizen influenced, citizen empowered and citizen owned companies which are the intended beneficiaries of the reservation schemes as contained in the preferential procurement regulation of 2011.The findings on the reservation scheme confirmed that of Matakala et al., (2015) when they stated that much as the reservation schemes at first glance appear positive and meant to benefit indigenous local contractors, the three 'citizens' companies in the Public Procurement act and Citizen Economic Empowerment act allow a foreign company to simply provide a citizen with a minimal shareholding and qualify to become a 'citizen' company which implied that in many instances, the reserved projects still ended up being given to foreign companies.

Only 2 respondents knew about the CFI an initiative in the road sector meant to assist SME contractors have access to finances. The respondents who had knowledge of the CFIs stated that they had failed to achieve their objective as financial institutions were still reluctant to lend money to SME contractors due to the delays in payments from government.

4.2.11 Stakeholders needed in the development of SME contractors

Respondents were asked on other stakeholders in their opinion apart from government who are needed in the development of SME contractors and the following stakeholders were mentioned:

- Financial institutions which can help in providing working capital and loans to SME contractors;
- Insurance companies to help in provision of bonds which are required in some of the contracts;
- Universities and colleges which can help in providing technical and business management skills and;
- Suppliers and manufacturers to make readily available construction materials

4.3 Questionnaire survey

The questionnaire survey was carried between mid June 2019 up to mid July 2019.The questionnaires were sent to different construction industry stake holders which included contractors, consultants, clients, regulators and financial institutions. A total of 75 questionnaires were sent and 56 were returned representing a response rate of 75 percent. Table 4-2 summarises the distribution of questionnaires.

Table 4-1 Distribution of questionnaires

Distributed in number	Returned in number	% response rate
75	56	75

4.3.1 Questionnaire design

The questionnaire was designed with five parts. Part one was aimed at collecting data on the respondent's back ground while part two was aimed at establishing how respondents viewed some of the constraints presented to them with regards importance as far as impeding development of SME contractors in Zambia was concerned. Part three was aimed at establishing the impact of some of the constraints on the performance of SME contractors whereas part four looked at the impact that the measures put by government have had on the development of SME contractors in Zambia. The last part of the questionnaire sought to find out how respondents viewed the possible measures presented to them in terms of their importance in developing SME contractors in Zambia.

The measurement used to collect data for part two, three and five was ordinal. Measure of importance of constraints and importance of measures to develop SME contractors was based on mean score rating as such numerical values were assigned to the ordinal scale with 5 being very important, 3 averagely important and 1 being unimportant. Responses on provided possible impacts of constraints on performance of SME contractors and impact of measures put by government on the development of SME contractors were assigned numerical values to the ordinal scale with 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = strongly agree. The formula used for calculating the mean score based on weighted averages is shown as in Equation 4-1.

$$\text{Mean score}=\sum_{j=1}^{5}(\text{IjRj}/\sum Rj) \quad \text{.....Equation 4-1}$$

Where: **I**j is the importance weight (1, 2, 3, 4 or 5) assigned to option j; **R**j is the number of respondents who provided responses to option j. The mean score values were further interpreted to reflect the responding rating to aid conversion of continuous data into discrete categories (Kululanga *et al.*, 2002) (cited by Kaliba,

2015). In this research the discrete categories for part two and part five were classified as follows:

4.500 < mean score ≤ 5.000	very important as a constraint/measure needed
3.500 < mean score ≤ 4.500	important as a constraint/measure needed
2.500 < mean score ≤ 3.500	averagely important as a constraint/measure needed
1.500 < mean score ≤ 2.500	of little importance as a constraint/measure needed
0.000 < mean score ≤ 1.500	unimportant as a constraint/measure needed

Whereas the discrete categories for part three were classified as follows:

4.500 < mean score ≤ 5.000	strongly agree with the statement
3.500 < mean score ≤ 4.500	agree with the statement
2.500 < mean score ≤ 3.500	Neutral on the statement
1.500 < mean score ≤ 2.500	disagree with the statement
0.000 < mean score ≤ 1.500	strongly disagree with the statement

4.3.2 Profile of respondents

This sought to find out the respondent's involvement in the construction industry, number of years of experience and further the grade and category in the case of contractors.

i) Respondent's sector type

Respondents used were the different stake holders in the construction industry so that biasness in responses is eliminated which would otherwise may have been the case if only contractors were considered. The various stake holders involved were SME contractors, consultants, clients, regulator and financial institutions. Figure 4-2 shows the respondent's sector types.

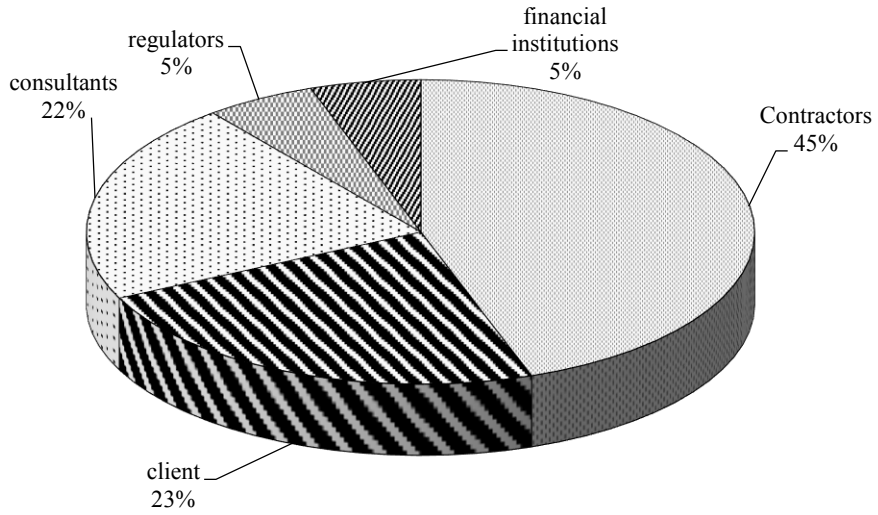

Figure 4-7 Respondent's sector type

From figure 4-7, 46 percent of the respondents were SME contractors, 23 percent were clients that employ the SME contractors, 21 percent were consultants that handle designs and supervise works and a combined total of 10 percent of respondents represented financial institutions and construction industry regulator.

ii) Respondent's experience in the construction industry

Respondents had varying years of experience in the various sectors; 23 respondents had between 0-5years of experience and 33 respondents had more than 5yrs of experience which provided confidence in the responses given on the various issues the questionnaire raised.

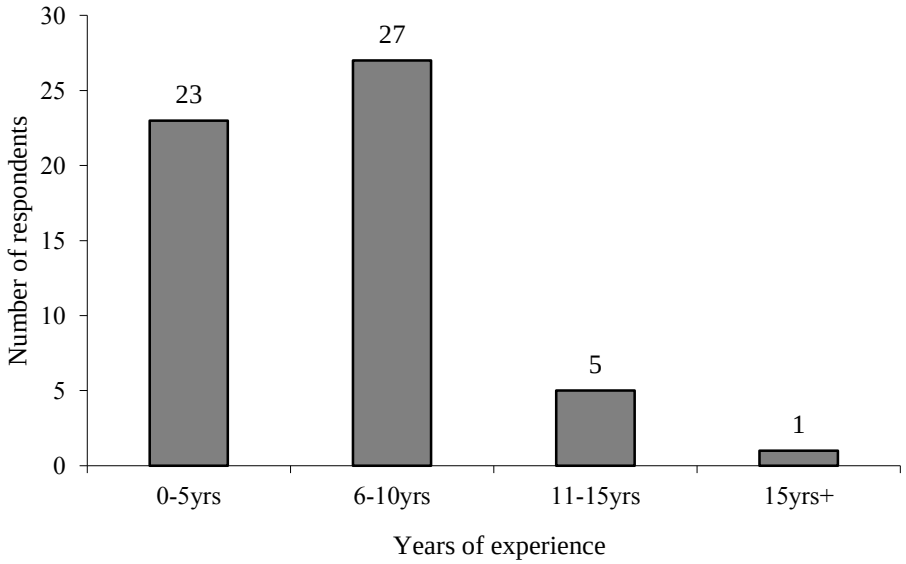

Figure 4-8 Respondent's years of experience in the construction industry

iii) Category and grade of SME contractors who responded

Twenty five (25) respondents from grade 6 to 3 and in categories civil, roads and buildings took part in the survey making 44.6 percent of the total respondents. Table 4-2 shows the distributions in terms of grade and category.

Table 4-2 Distribution of SME contractor respondents

Grade		
Type	Frequency	Percentage (%)
G3	2	3.6
G4	2	3.6
G5	9	16.1
G6	12	21.4
Total	**25**	**44.6**
Category		
Type	Frequency	Percentage
Civil	7	12.5
Roads	8	14.3
Buildings	10	17.9
Total	**25**	**44.6**

4.3.3 Descriptive statistics on the constraints to SME contractor development

Respondents were asked to rank in terms of importance from the list provided the constraints to SME contractor development in Zambia on a Likert scale of 1 to 5 with 1 being unimportant and 5 being very important.. There were differences in the way respondents perceived the constraints to SME contractor development in Zambia.

From the findings, 16 constraints from the 18 were found to be within the important and very important range going by the cutoff point for the mean score which was set at 3.5 as shown in section 4.3.1. Table 4-3 shows the statistics of the descriptive analysis.

It was established from the results shown in table 4.3.1 that late payments from clients with a mean score of 4.68 from all groups of respondents was considered the biggest constraint to contractor development in Zambia an outcome which also reflected what was observed in India by Raghavan and Kumar (2015) when they did a study on Problems Faced by Small Scale Contractors in India. It was however interesting to notice that late payments as a constraint though ranked first (1^{st}) by all the players on average was only ranked forth (4^{th}) by clients the lowest ranking by other individual players perhaps owing to the fact that they were the source from which that constraint emanated from so may not have been very sincere when answering.

The other nine highest ranked constraints by all players in descending order were: very high demand on loans, difficulties getting jobs, difficulty providing collateral requirements, difficulty accessing proper equipment, lack of technical skills, shortage of skilled manpower, corruption and bribery, lack of management skills and political interference in the award of contracts. The findings on very high demand on loans and difficult in accessing finances ranked second and fourth agreed with the findings of kulemeka et al., (2015) in the study on Critical Factors Inhibiting Performance of Small- and Medium-Scale Contractors in Sub-Saharan Region: A Case for Malawi in which they were ranked among the top five constraints believed to be important elements to Malawian SME contractors.

Table 4-3 Mean scores of constraints by various players in the construction industry

Constraints believed to be important for Zambian SME contractors	Client mean	Client ranking	Contractor Mean	Contractor ranking	Consultant mean	Consultant ranking	Regulator mean	Regulator ranking	Financial Inst. mean	Financial Inst. ranking	All players mean	All players ranking
late payment[M]	4.62	4	4.64	2	4.67	2	5.00	1	5.00	1	4.68*	1
very high demand on loans[L]	4.77	2	4.68	1	4.50	3	4.67	2	4.67	4	4.66*	2
difficulty getting jobs[L]	4.69	3	4.48	4	4.67	1	4.33	5	4.67	6	4.59*	3
difficulty providing collateral requirements[L]	4.62	5	4.60	3	4.42	6	3.67	7	4.00	16	4.45*	4
difficult accessing proper equipment[L]	4.54	6	4.32	5	4.25	9	4.33	4	5.00	2	4.39*	5
lack of technical skills[N]	4.85	1	4.16	7	4.50	4	4,33	6	4.33	13	4.36*	6
shortage of skilled manpower[L]	4.46	8	4.08	8	4.33	7	4.00	8	4.67	5	4.25*	7
corruption and bribery[L]	3.69	12	4.28	6	4.25	10	4.00	9	4.33	11	4.13*	8
lack of management skills[N]	4.31	10	3.88	12	4.17	12	4.67	3	4.67	8	4.11*	9
political interference in contract award[L]	4.31	9	3.88	10	4.25	11	3.67	12	4.00	15	4.05*	10
difficulties in preparing responsive bids[N]	4.54	7	3.62	14	4.42	5	3.67	11	4.67	3	3.98*	11
competition from larger contractors[L]	4.08	11	3.88	11	3.58	14	4.00	13	3.67	18	3.86*	12
lack of detailed deliberate policy to develop SME[L]	3.54	13	3.72	13	4.25	8	3.33	15	4.33	9	3.80*	13
high taxes[L]	3.23	16	3.76	12	3.67	13	3.33	14	4.00	14	3.61*	14
lack of ICT skills[N]	3.31	15	3.52	16	3.50	16	4.00	10	4.00	17	3.52*	15
shortage of construction material on the market[L]	3.31	14	3.52	17	3.58	15	2.33	18	4.33	12	3.32	16
fluctuations in material price[L]	2.38	18	3.6	15	3.33	17	3.33	16	4.67	7	3.30	17
lack of standard contract documentation[M]	2.77	17	3.12	18	3.25	18	3.00	17	4.33	10	3.13	18

constraints emanating from the business environment[L], constraints emanating from the client[M], constraints emanating from the contractor's deficiencies[N]

$3.500 <$ mean score* ≤ 5.000 important/very important as a constraint

The first ranked constraint according to respondents which was late payments comes from constraints emanating from the client, the second, third, fourth, fifth, seventh, eighth, and tenth constraints emanate from the business environment whereas the sixth and ninth ranked were constraints which arise from the deficiencies of the contractors themselves.

The study however established that shortage of construction material on the market with mean score 3.32, fluctuations in material price with mean score 3.30 and lack of standard contract documentation with mean score 3.13 were not so important constraints to development of SME contractors in Zambia as they all fell in the averagely important scale of $2.500 < \text{mean score} \leq 3.500$ according to discrete categories as assigned in section 4.3.1.

4.3.4 Descriptive statistics on the impact of constraints on performance of SME contractors in Zambia

Respondents were asked to choose the possible impacts of some of the constraints on the development of SME contractors from the list provided on a Likert scale of 1 to 5 with 1 being strongly disagree and 5 being strongly agree. The responses from the respondents were descriptively analyzed and the results were tabulated as shown in table 4-4.

Table 4-4, shows that all respondents agreed with the provided statements as being impacts of some of the constraints as can be seen from their mean scores all being above 3.5 which was the cut off mean score for agreeing with the provided possible impact of the constraints as assigned in section 4.3.1.

Based on the findings from the research, it was established that constraints that SME contractors face impact negatively on their development and performance. It was established that lack of technical skills leads to SME contractors being unable to execute works to the required quality and standard as thy resort to cheap labour. This agreed with the results from the interviews as well as the observation made by NCC (2004) when they stated that lack of adequately qualified staff to effectively execute works has hampered the performance of small-scale contractors. On the lack of management skills, the study further confirmed the findings of Crosswell and McCutchen (2001) in which they stated that SME contractors could not account for

their profits and losses adequately due to owners handling their business finances on their own in many times without even having any accounting and financial management skills.

Table 4-4 Impact of constraints on SME contractors

Difficult accessing finances	**Mean score**	**Variance**
Failure to purchase proper equipment	4.43*	.613
Inability to satisfy financial requirement	4.41*	.901
Shoddy works resulting from improper equipment	4.14*	1.070
Delayed payments		
Inconsistencies in the cash flow	4.62*	.493
Contractor abandoning work	4.50*	.364
Contractor owing bank and defaulting	4.48*	.691
Lack of management and technical skills		
Failure to prepare responsive bids	4.50*	.582
Failure to account for profits and expenses	4.21*	.644
Shoddy works due to lack of technical know how	4.36*	.779
Lack of continuous work opportunities		
Underutilization of equipment	4.16*	.756
Difficulty retaining competent staff	4.45*	.506
Uncertainties in supply and price of materials		
Delays in project delivery	4.39*	.279
Profitability of SME contractors affected	3.98*	.709
Unfair competition from bigger contractors		
Damages prospect and stagnates growth of SMEs	4.41*	.848
Shortage of skilled man power in the industry		
Shoddy works from SME contractors	4.37*	.996
Rise of safety concerns	4.18*	.877
Rise in cost of project delivery	4.18*	.804
Presence of corruption and bribery		
Difficulty wining contracts by SMEs	4.50*	.618

Agree as impact* for $3.500 < \text{mean score} \leq 5.000$

From the findings, SME contractors suffer from financial related problems such as late payments and difficulty accessing finances which impact negatively on their performance. Late payments lead to inconsistences in the cash flow of a contractor and consequently lead to a contractor defaulting and eventually owing banks agreeing with the findings of (Ofor, 1991; Thwala & Mvubu, 2008). On difficulty accessing finances, the study discovered that SME contractors end up failing to purchase proper equipment; failing to satisfy financial requirements such as bid bond and performance bond and also leads to sub-standard works resulting from usage of improper equipment. These findings from the questionnaire survey agreed with findings from the interviews and those of Adam (1997) when he stated that difficult accessing finances tends to have spill over effect as it affects a contractor's ability to satisfy financial requirements demanded in some of the contracts.

According to Dlungwana and Rwelamila (2004) in a study 'Contractor Development Model for Promoting Sustainable Building- a case of developing management capabilities of contractors', local contractors needed some limited form of temporary protection to enable them develop their capacity to grow and compete in an open market as failure to do so destroys local contractors, with grave consequences for local economies. This agrees with the findings in this research on unfair competition as respondents were of the view that unfair competition damages the prospects and stagnates the growth of SMEs.

The impacts from table 4-4 whose mean score was above 3.5 were further tested for significance and it was established that all the impacts as given by respondents were statistically significant. Table 4-5 shows the results from the standard t tests.

Table 4-5 Standard t-test results for impacts of constraints on SME contractors

Difficult accessing finances	Mean	Std deviation	N	Ref	t-value	df	P value
Failure to purchase proper equipment	4.43*	.783	56	3.5	8.875	55	.000
Inability to satisfy financial requirement	4.41*	.949	56	3.5	7.180	55	.000
Shoddy works resulting from improper equipment	4.14*	1.034	56	3.5	4.650	55	.000
Delayed payments							
Inconsistencies in the cash flow	4.62*	.702	56	3.5	11.99	55	.000
Contractor abandoning work	4.50*	.603	56	3.5	12.41	55	.000
Contractor owing bank and defaulting	4.48*	.831	56	3.5	8.844	55	.000
Lack of management and technical skills							
Failure to prepare responsive bids	4.50*	.763	56	3.5	9.811	55	.000
Failure to account for profits and expenses	4.21*	.803	56	3.5	6.660	55	.000
Shoddy works due to lack of technical know how	4.36*	.883	56	3.5	7.266	55	.000
Lack of continuous work opportunities							
Underutilization of equipment	4.16*	.869	56	3.5	5.688	55	.000
Difficulty retaining competent staff	4.45*	.711	56	3.5	9.955	55	.000
Uncertainties in supply and price of materials							
Delays in project delivery	4.39*	.528	56	3.5	12.65	55	.000
Profitability of SME contractors affected	3.98*	.842	56	3.5	4.286	55	.000
Unfair competition from bigger contractors							
Damages prospect and stagnates growth of SMEs	4.41*	.848	56	3.5	8.036	55	.000
Shortage of skilled man power in the industry							
Shoddy works from SME contractors	4.37*	.983	56	3.5	6.662	55	.000
Rise of safety concerns	4.18*	.936	56	3.5	5.424	55	.000
Rise in cost of project delivery	4.18*	.897	56	3.5	5.664	55	.000
Presence of corruption and bribery							
Difficulty wining contracts by SMEs	4.50*	.786	56	3.5	9.518	55	.000

*Statistically significant at P <0.05

4.3.5 Impact of measures put up by government to help develop SME contractors

i) Impact of the 20 percent subcontracting policy on the development of SME contractors.

Respondents were asked whether the 20 percent subcontracting policy which was passed by the Government of the republic of Zambia in 2012 had achieved its objectives. Figure 4.9 shows the respondent's views on the 20 percent subcontracting policy.

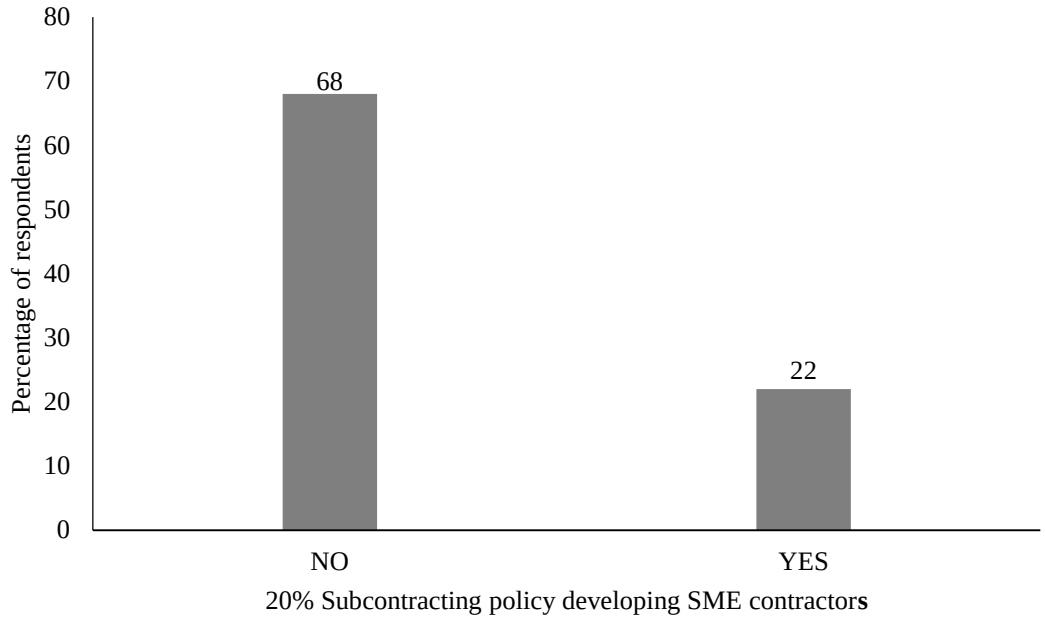

Figure 4.9 Percentage breakdown of the 20% subcontracting policy having achieved its objectives

The study established that the 20 percent subcontracting policy which was passed in 2012 with the objective of empowering local contractors, creating jobs for Zambian citizens and to upgrade local contractors from grade six (6) through to one(1) had not achieved its objectives agreeing with the findings of (Muya *et al.*, 2014; Phiri, 2016).This was shown by majority of respondents making 68 percent arguing that the policy had not achived its objectives with only 22 percent stating that the policy had achieved its objectives an outcome which was also consistent with the findings from the interviews.

When asked whether the policy lacked clear implementation modalities, majority of the respondents making 71 percent were of the view that the policy lacked clear

implementation modalities whilst 10 percent disagreed that the policy lacked clear implementation modalities with 19 percent maintaining a neutral position.

ii) Adherence to the Citizen Economic Empowerment preferential treatment

Respondents were asked to rate in percentage the adherence to the Citizen Economic Empowerment (CEE) preferential treatment contained in the CEE preferential procurement regulation of 2011 which states that 'state institutions may in evaluating a bid, adjust the bid price to facilitate preferential evaluation of a bid as follows: 4 percent for a citizen influenced company, 8 percent for a citizen empowered company and 12 percent for a citizen owned company. Figure 4-10 gives the responses from the respondents.

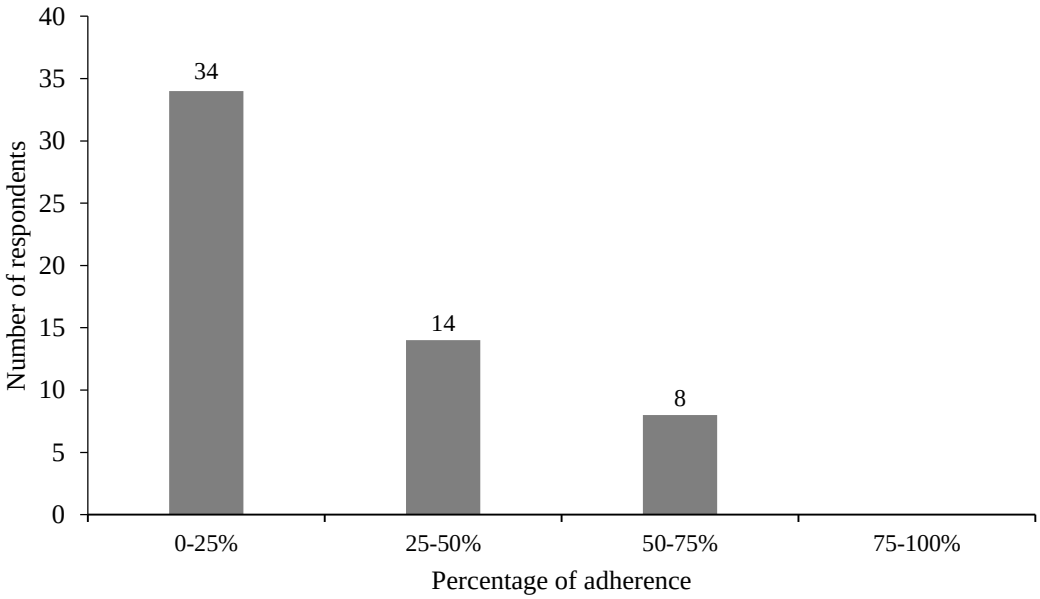

Figure 4-10 Breakdown of respondent's views on the rate of Adherence to CEE preferential treatment

From the results in figure 4-10, majority of the respondents felt there was no adherence to the preferential treatment which was meant to empower local contractors with jobs as can be seen by 48 representing 86 percent of the total respondents stating that the adherence levels were less than 50 percent.

When asked the extent to which they agreed that the CEE preferential treatment regulation had helped develop SME contractors in Zambia, a combined total of 60 percent either disagreed or strongly disagreed with only a combined total of 17

percent agreeing that the CEE preferential treatment regulation had helped develop local contractors. Twenty one (21) percent of the respondents however could not agree or disagree perhaps owing to the fact they were not sure. Figure 4-11 shows the responses of the respondents.

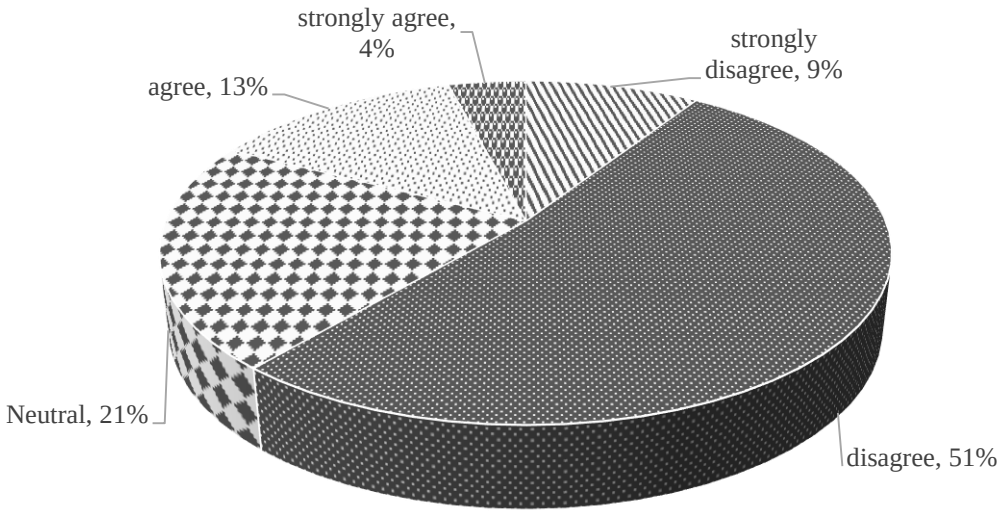

Figure 4-11 CEE preferential treatment regulation developing local contractors

iii) Adherence to the CEE reservation schemes

Respondents were asked to rate the adherence to the reservation schemes contained in the CEE Preferential procurement regulations of 2011 which states that 'the Commission and the Authority shall reserve a public procurement for a citizen influenced company, citizen empowered company and citizen controlled company with estimated values with respect to works as follows:

- Building construction works not exceeding twenty million (ZMK 20,000,000); and
- Civil and road works not exceeding thirty million (ZMK 30,000,000)'.

Fifty (50) respondents out of a total of 56 were of the view that adherence to the CEE reservation schemes in public procurements was below 50 percent. Figure 4-12 shows the responses from the respondents.

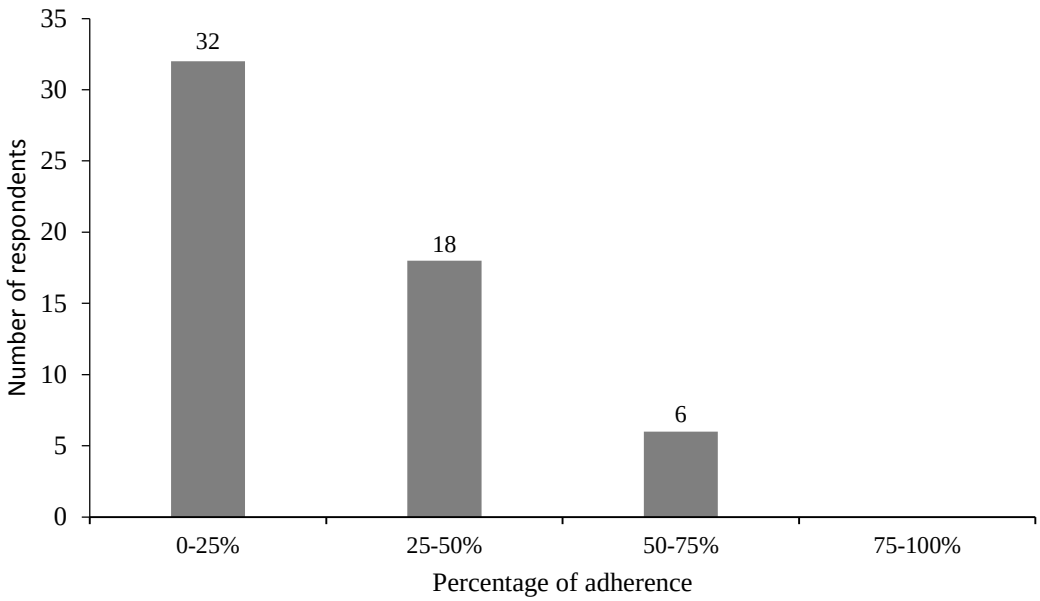

Figure 4-12 Adherence to CEE reservation schemes

When asked if reservation schemes as contained in the CEE preferential procurement regulation of 2011 had helped grow SME contractors in Zambia, 52 percent argued that the reservation schemes had not helped in the development of SME contractors with only 22 percent stating that they had helped in developing SME contractors whereas 26 percent opted to remain neutral.

From the findings of the study, it was clear the preferential procurement regulation of 2011 which contains the preferential treatment and reservation schemes was yet to yield the desired outcome as majority of the respondents from the study stated that the adherence had been below 50 percent for both

iv) Construction finance initiative (CFI)

In a bid to try and assist SME contractors in the road sector access finances from financial institutions, government introduced Construction Finance Initiative (CFI). Respondents were asked if they knew about the CFIs in the road sector. Figure 4-13 shows the responses.

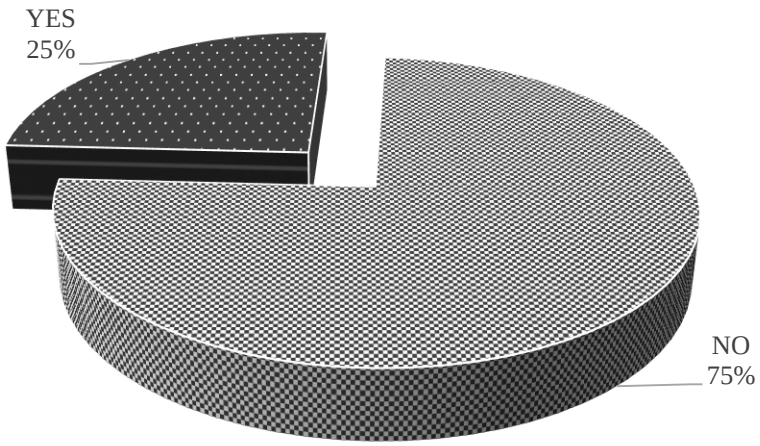

Figure 4-13 Knowledge about the construction finance initiative (CFI)

When those who had knowledge of the CFIs were asked whether CFIs had helped develop SME contractors, only 2 out of 14 were in agreement with 12 representing 86 percent of the respondents who had knowledge of the CFI arguing that they had failed to develop SME contractors in the road sector.

From the findings of both the interviews and questionnaire, it was clear that majority of the respondents did not know about the CFI in the road sector perhaps explaining why the few who knew about it stated that the initiative has not helped in the development of local contractors in the road sector.

4.3.6 Measures important in the development of SME contractors according to respondents

Respondents were asked to rank measures from the list provided in their importance in the development of SME contractors in Zambia on a Likert scale of 1 to 5 with 1 being unimportant and 5 being very important and their responses were analyzed descriptively and the results ranked in their descending order of the mean scores. Table 4-4 shows the descriptive analysis of the measures.

Table 4.6 Measures important in the development of SME contractors in Zambia

Measures important to develop SME contractors	N	Mean	Std. Deviation	Variance	Ranking
more efficient and decentralized payment procedure	56	4.38*	.676	.457	1
provision of materials or loan guarantees by contracting agencies to suppliers or banks	56	4.36*	.749	.561	2
establishment of construction bank for SME	56	4.27*	1.070	1.145	3
clearly defined subcontracting policies in the entire construction sector	56	4.27*	.700	.491	4
More training and advisory services	56	4.23*	.894	.800	5
provision of tax incentive	56	4.21*	.967	.935	6
Access to equipment through hire purchase	56	4.14*	.903	.816	7
more contractor development programmes	56	3.93*	.988	.977	8
tendering preferences	56	3.84*	.968	.937	9
provision of mobilization allowance	56	3.71*	1.124	1.262	10
lower retention monies	56	3.71*	1.004	1.008	11
Contract splitting	56	3.63*	1.001	1.002	12
improved access to materials	56	3.48	1.079	1.163	13
standardization of contract documents	56	3.38	1.019	1.039	14
incentives for small firms to team up	56	3.21	.948	.899	15

3.500 < mean score* ≤ 5.000 important/very important as a measure in developing SME contractors

From table 4-4 it can be seen that 12 proposed measures out of the provided 15 were viewed as either important or very important having all been above the mean score of 3.5 which was the least score in the important range as set in section 4.41 above for the discrete categories.

The study established that more decentralized payment procedures which is one of the solutions to late payments was the most important measure to contractor development in Zambia as SME contractors suffer from delayed payments. The results on decentralizing payment procedures being the highly ranked measure concur with the findings adduced by Adam (1995) in a study on 'Indigenous Contractors Perceptions of the Constraints on Contractors Performance and Development Programmes Required in Nigeria' when the respondents in that study ranked decentralized payments procedures highest amongst the programmes

important to develop contractors. The other measures in the top five deemed important according to respondents in their descending order of their mean scores were: provision of materials or loan guarantees by contracting agencies to suppliers or banks, establishment of construction bank for SME, clearly defined subcontracting policies in the entire construction sector with more training and advisory services taking the fifth ranking. The findings deemed important in the development of SME contractors also agreed with the Construction industry development board (2011) on the key factors that need to be in place for successful contractor development.

This study however established that access to materials, standardization of contract documents and incentives for small firms to team up were just averagely important with regards developing SME contractors in Zambia.

4.4 Chapter Summary

In this chapter, results from semi-structured interviews and questionnaire survey were analysed and discussed. Constraints affecting development of SME contractors were ranked in order of importance, impacts of some of the constraints were identified, impact of measures put by government on the development of SME contractors were assessed and finally the measures important in the development of SME contractors were identified. The next chapter presents the conclusion and recommendations.

CHAPTER 5 CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter presented the analysis and discussion of the results and findings of the interviews and questionnaire survey in relation to the findings of other scholars on the subject. This chapter presents the study conclusions and the recommendations.

The research was set out to:

i) identify the constraints to contractor Development in Zambia;
ii) establish impact of these constraints on performance of SME contractors;
iii) identify measures put in place by government to provide an enabling environment for the growth of SME contractors in Zambia;
iv) assess the impact of the current measures by government in place to provide an enabling environment for the growth of SME contractors in Zambia; and
v) recommend ways of developing sustainable SME contractors in Zambia

5.2 Conclusions

The study established that SME contractors in Zambia were faced with a lot of constraints that had impacted negatively on their performance. This study established that delayed payments was the biggest constraint that SME contractors faced in Zambia. The other important constraints included: very high demand on loans; difficulty getting jobs; difficulty providing collateral requirements; difficulty accessing proper equipment; high demand on loans; lack of technical skills; shortage of skilled manpower; corruption and bribery; lack of management skills; political interference in contract award; difficulty preparing responsive bids; unfair competition from larger contractors; lack of detailed deliberate policies to develop SME contractors; high taxes and lack of ICT knowledge.

The constraints that SME contractors faced had trickle down effects. Late payments led to inconsistencies in the cash flow, contractor abandoning work and in some cases an SME contractor ended up owing the bank and defaulting. This study established that difficulty accessing finances was the cause why SME contractors failed to satisfy financial requirements demanded in some of the projects such as bid bonds and performance bonds. Failure to access finances further made SME contractors have difficulties to procure proper equipment a lack of which had

contributed to failure to attain the required quality on some projects as SME contractors ended up in most times improvising. The contractor's failure to engage competent and qualified personnel in business management led to poor running of their businesses especially in the areas of finances as they were unable to account for their profits and loses properly. A lack of technical skills by employed personnel led to failure by SMEs in most times to prepare responsive bids and also contributed to the sub-standard works as they lacked technical knowhow. It was also discovered that SME contractors experienced difficulties of getting jobs continuously which made it difficult for them to retain competent personnel. In some cases, this research discovered that difficulty getting jobs was attributed to unfair competition which came from larger contractors thereby damaging the prospects of small contractors.This research further managed to establish that the presence of political interference, corruption and bribery made it difficult for SME contractors to win some of the contracts.

The study established that government had put up a number of measures to try and help develop SME contractors in Zambia. These measures were: the 20 percent subcontracting policy; the restriction of foreign contractors to grade one (1) and two (2); the CEE preferential treatment regulation from the CEE preferential procurement regulation of 2011;the reservation schemes from the CEE preferential procurement regulation of 2011 and the construction finance initiative (CFI) in the road sector.

It was clear from the findings however that the measures put in place by government to develop SME contractors in Zambia had minimal positive impact. This study established that the 20 percent subcontracting policy had not achieved its objectives as there were weak monitoring systems in place to ensure adherence and that the policy lacked clear implementation guidelines. The study revealed that the adherence by public institutions in implementing the CEE preferential procurement regulations of 2011 had been to a large extent below 50 percent. Talking of the reservation schemes, the study further revealed that in their current form the reservation schemes could not empower local contractors as foreign contractors were still able to easily have contracts in the reservation thresholds as all they simply needed to do was to bring Zambian citizens on board with minority shareholding to qualify for citizen influenced and citizen empowered companies which were two (2) of the three (3) groups of companies for which the CEE preferential regulations were intended to

benefit. On the restriction of foreign contractors to grade one (1) and two (2), this study established that it did not have greater impact as most projects in the SME category did not have much economic value as compared to those in grade one (1) and two (2).It was also clear the CFIs had not helped much in developing SME contractors in the road sector as financial institutions were still skeptical to lend money to SME contractors due to the delays in payments from government.

The study established that for SME contractors to develop government had to take deliberate and well-coordinated measures to provide an enabling environment for their growth. This study established that the measures important in the development of SME contractors in Zambia were: provision of more efficient and decentralized payment procedures; provision of material or loan guarantees by contracting agencies to suppliers or banks; establishment of construction bank for SME contractors; provision of clearly defined subcontracting policies in the entire construction sector; provision of more training and advisory services; provision of tax incentives; increase access to equipment through hire purchase; provision of contractor development programmes; provision of tendering preferences; provision of mobilization allowances in contracts; lower retention monies and also provide contract splitting to help SME contractors easily access contractors.

5.3 Limitations of the study

Taking into consideration the sampling technique used in this research and the limited size of the sample, care needs to be taken when interpreting these results at national level. Furthermore other categories of contractors were not well represented in the sample and as such the results cannot fully represent what perhaps might be the outcome if the entire population comprising well represented categories was considered.

5.4 Recommendations

From the study findings, it is clear SME contractors in Zambia are faced with a myriad of constraints which have affected their performance and there is therefore urgent need to address these constraints if SME contractors are to compete favourably. The following are the recommendations aimed at helping develop SME contractors in Zambia:

5.4.1 Immediate and medium term actions

i) There is need for government being the largest client to decentralize payment procedures and implement only projects budgeted for to reduce delayed payments.

ii) There is need for contracting agencies to help SME contractors under contract access materials or loan facilities by providing guarantees on behalf of SME contractors to suppliers or banks.

iii) There is need for government to clearly define implementation modalities of the 20 percent mandatory subcontracting policy and subsequently push to turn the policy into law to ensure adherence.

iv) Government should revise the target companies under the reservation schemes to include only companies which have majority shareholding for local citizens.

v) Training programmes for SME contractors should be formulated on the basis of an assessment of training needs and requirements. There is need for regular provincial training and advisory workshops by NCC.

5.4.2 Long term actions

i) There is need to come up with legislation that addresses late payments and allows contractors to be paid interest for late payments. This would provide the incentive for government departments to implement faster systems to pay contractors.

ii) Government should come up with a collateral free construction bank which would help SME contractors to access finances at low interest rates.

iii) To ease the difficulty of SME contractors accessing equipment, hire purchase should be promoted. Government should also consider supporting and promoting the plant hire sector by offering incentives to companies that wish to operate such ventures.

iv) There is need to promote use of e-procurement in the ward of contracts to increase accountability and transparency whilst reducing human interaction. In the absence of e procurement, award of contracts under a scheme which is open and fair to minimize corruption and bribery should be encouraged. Measures such as public opening of tenders, selection of contractors by an agreed ranking structure rather than subjective decisions and ward of contracts by a tender board rather than individuals should be promoted. Formulation of Integrity

committees (ICs) as initiated by the ACC in institutions to be looking into matters of corruption should be mandatory.

REFERENCES

Abor, J. and Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International Research Journal of Finance and Economics*, 39(6):218-228. Available from: http://www.eurojournals.com/finance.htm [Accessed: 19th July 2018].

Achola, P.and Bless, C. (1988). Fundamentals of Social Research Methods: An African perspective, Lusaka: UNZA Press.

Adams, O. (1995). Indigenous Contractors' Perceptions of the Constraints on Contractors' Performance and Development Programmes Required in Nigeria *HABITAT INTL. Vol. 19, No. 4, pp. 599-613.*

Adams, O. (1997). Contractor development in Nigeria: perceptions of contractors and professionals, *Construction Management and Economics*, 15(1), 95-108.

ADB. (2012). SME Development: Government Procurement and Inclusive Growth.

Ahiawodzi, A.K. and Adade, T.C. (2012). Access to credit and growth of small and medium scale enterprises in the Ho Municipality of Ghana. *British Journal of Economics, Finance and Management Sciences*, 6(2):34-51.

Aniekwu, N. A. (2013). The Politics of the transformation of the construction industry in Africa; proceedings of 2nd applied research conference in Africa. Kumas: ARCA.

Badu, E., Edwards, D. J., and Owusu-Manu, D. (2012). Trade credit and supply delivery in the Ghanaian construction industry: Analysis of Vendors interaction with small to medium scale enterprises. *Journal of engineering, design and technology, 10* (3).

Baloyi, L. and Bekker, M. (2011). Causes of Construction Cost and Time Overruns: The 2010 FIFA World Cup stadia in SA. Acta Structilia , 18, 51-67.

Bank of Zambia (2007).Annual report 2007. Available from: http://www.boz.zm/BOZAnnualReport2007.pdf [accessed 20th October, 2018].

Bartik, T. J., and Erickcek, G. (2014). Simulating the Effects of the Tax Credit Program of the Michigan Economic Growth Authority on Job Creation and Fiscal Benefits. *Economic Development Quarterly , 28* (4), 314–327.

Berg, L. B. (2001). Qualitative Research Methods for the Social Sciences, 4th edition, California State University Press, California.

Buys, F. (2002). *Research Methodology and Techniques QRT 303.* Port El.

Central Statistics Office (2017) Labour Force Survey Report Available from https://www.zamstats.gov.zm/phocadownload/Labour/2017%20Labour%20Force%20Survey%20Report.pdf [accessed 15 June,2019].

Chilipunde, R.L.(2010). Constraints and Challenges faced by Small, Medium and Micro Enterprise Contractors in Malawi.

Chiocha, C.I.M. (2006). Corruption and its effects on the development of construction industry in Nelson Mandela Metropolitan Municipality in South Africa. Unpublished BSc honours treatise. Port Elizabeth: Nelson Mandela Metropolitan University.

CIDB (2011). Guidelines for implementing Contractor Development Programmes.

Crosswell, J. and McCutchen, T. (2001). Small contractor Development and Employment: A brief survey of sub Saharan Experiences in relation to Civil Construction.

Davies, J. (2011). Filling in the Blanks: how companies View Sustainability Surveys. Available from; http://www.greenbiz.com/blog/2011/01/03/filling-blanks-how-companies-view sustainability- surveys [accessed on July, 2, 2018].

Dawson, C. (2007). *A Practical Guide to Research Methods, A User Friendly Manual for Mastering Research Techniques and Projects* 3rd, How To Content: Oxford.

DECD, (2017). Technical Report: Policies that Promote SME Participation in Public Procurement. Available from https://www.enterprise-development.org/wp-content/uploads/DCED-BEWG-SME-Procurement-Report.pdf [accessed 11 February, 2019].

Dlungwana, S. and Rwelamila, O. (2004) Contractor Development Model for Promoting Sustainable Bulding- a case of developing management capabilities of contractors. International Symposium on Globalisation and Construction: CIB W107 (Construction in Developing Economies) and CIB TG23 (Culture in Construction) (pp. 348-358).Bangkok, Thailand: CIB-SCE, AIT.

Eyiah, A. and Cook, P. (2003). Financing small and medium-scale contractors in developing countries: A Ghana case study. Construction Management & Economics. 21. 357-367.

Fatoki, O. and Garwe, D. (2010). Obstacles to the growth of new SMEs in South Africa: A principal Component analysis approach. *African Journal of Business Management*, 4(5):729-738.

Fellows, R. & Liu, A. (1997). *Research methods for construction*. Edinburgh:Blackwell Science. izabeth: Nelson Mandela Metropolitan University.

Goel, R and Nelson, M (2008). *Causes of Corruption History, Geography and Government*. BOFIT discussion paper 2008. http:/www.bofit/bofit.

Habitat (1996). Policies and Measures for Small-contractor Development in the Construction industry.

Hernes, T. (1998). *Training contractors for results: A guide for trainers and training managers.* Geneva: International Labour Office Geneva.

Hillebrandt, P.M. (2000) *Economic Theory and the Construction Industry*, 2nd Edition. Macmillan, Basingstok.

Hove, G. (2016) Small Scale Contractors in Africa's Emerging Markets: The Case of South Africa. Open Journal of Business and Management , 4, 649-658.

Humphrey, J. and Schmitz, H. (1995). Principles for promoting clusters and networks of SMEs. *A Small and Medium Enterprises Programme of the United Nations Industrial Development Organisation.* Available at: *http://www.unido.org* [Accessed on 18th July 2018].

Hussain, I., Farooq, Z., and Akhtar, W. (2012). SMEs development and failure avoidance in developing countries through public private partnership. *African Journal of Business Management , 6* (4), 1581-1589.

ILO (1997). Agriculture Sector Support Project Feeder roads 34, SLRA/ILO project SIL/93/01/IDA, SLRA/ILO, *Progress report no 7.*

ILO (1987). Guidelines for the Development of Small-scale Construction Enterprises.

Kaliba, C., (2015). Knowledge creation, integration and management – A study of civil engineering consulting firms. Ph.D. Thesis, University of Zambia.

Kothari, C.R., (2004). *Research Methodology: Methods and Techniques*. 2nd Edition. New Delhi: New Age International Limited.

Kulemeka P.J., Kululanga G. and Morton D. (2015). *Critical Factors Inhibiting Performance of Small- and Medium-Scale Contractors in Sub-Saharan Region: A Case for Malawi.* Hindawi Publishing Corporation Journal of Construction Engineering, Volume 2015, Article ID 927614, 17 pages. Available from: http://www.hindawi.com/journals/jcen/2015/927614/[accessed 20th January,2019]

Kumar R, (2011). Research methodology, a step-by-step guide for beginners. 3rd London: SAGE Publications Ltd.

Laryea, S. (2010). Challenges and Opportunities Facing Contractors in Ghana, West Africa Built Environment Research (WABER) Conference, 27 – 28 July 2010, Accra Ghana.

Lazarus, S. (2005). *An integrated skills development model for emerging contractors.* Unpublished MBA dissertation. Port Elizabeth: Port Elizabeth Technikon. Stretton, A. (1984). *The building industry in Papua New Guinea*, Papua New Guinea: Institute of Applied Social and Economic Research.

Liedholm, C. and Mead, D.C. (1999). Small Enterprises and Economic Development: The dynamics of micro and small enterprises. Routledge: London.

Liyanda, T. (2017). Access to Finance: SME perceptions of Financial Service Providers.

Loewe, M., Blume, J., Schönleber, V., Seibert, S., Speer, J. and Voss, C. (2007). The impact of favoritism on the business climate: a study on wasta in Jordan, Bonn: DIE (Studies 30).

Louw, L. and Venter, P. (2015).Strategic Management, Developing Sustainability in Southern Africa. 3rd edition. Oxford University Press. Cape Town. South Africa.

Macwan'gi, M., Muya. M., .Matakala. L and Milapo N. (2017). 'Evolving cultural norms at crossroads with legal frameworks in reducing corruption in the procurement of construction projects in zambia'. *International Journal of Advances in Mechanical and Civil Engineering*, 4(5) p1.

Mahemba, E. (2011). Literature Review on small and medium-size enterprise Access to credit and support in South Africa. Underhill corporate solutions. Pretoria. South Africa.

Matakala, L., Muya, M., Mwanaumo, E., Sanga, S., Kaliba, C., and Mwiya, B. (2015).Module 001,Introduction to the legal framework regulating the Zambian Construction Industry, NCC, Lusaka, Zambia.

Mayer.R.J., Painter, M.K., and Lingineni, M.(1995). Information Integration for Concurrent Engineering (IICE) Towards a Method for Business Constraint Discovery (IDEF9), Human Resources Directorate Logistics Research Division, Knowledge Based. Systems, College Station, Tex, USA.

MOF (2002). 'Zambia poverty reduction strategy paper 2002 -2004'.Government of the republic of Zambia. FSD Zambia (2009). Finances national survey 2009. Dynamics of Zambia's changing financial landscape. Lusaka, Zambia: FSD Zambia.

MCTI, (2008). Micro, Small and Medium Enterprises Development Policy. Final Document.

MCTI, (2007). Small and medium enterprises survey 2003 – 2004, final report, ministry of commerce, trade and industry.

MCTI, (2004). Small and Medium Enterprises Survey 2003-2004. Final Report.

Miles, D.and Neale, R. (1991). Building for tomorrow: International experience in construction industry development. International Labour office, Geneva.

Ministry of Works and Supply (2012). Policy Statement: Empowerment of Zambian owned Local Road Contractors. (Online), Available from: http://www.rda.zm [Accessed on 5 October, 2018].

Morand, P.H. (2003). SMES and public procurement policy. Review of Economic Design. 8. 301-318. 10.1007/s10058-00.

Mullins, D. (1994). Managing innovation information in engineering and construction firms. *Journal of management in engineering, ASCE,* 14(1): pp. 58-66.

Mukumbwa, B. and Muya, M. (2012). Ethics in the construction industry in Zambia. International Journal of Construction Management, Vol. 13, No. 2, pp.43-65.

Msita, K. (1993).Development of the Construction Industry in the United Republic of Tanzania Within the IRP Framework. Paper presented at the integrated Road Programme Donors' Conference 4-5 October, National Construction Council, Dar es Salaam.

Mwanawina, I. and Mulungushi,J.(2002).*Exploring African Economic Growth Performance: The case study of Zambia*. Draft.

National Assembly, (2015).Minutes of the Committee On Communications, Transport, Works And Supply to the Fourth session of the Eleventh National Assembly.

National Council for Construction (NCC) (2017) *Annual report* 2017.

National Council for Construction (NCC) (2018) *Annual report* 2018.

National Council for Construction (NCC) (2004). Development of Contractor Registration Scheme with a focus on Small Scale Civil works Contractors, Final Report. Available from: http://www.ncc.org.zm [Accessed on 11 July,2018]

NRFA, (2017). *Annual report 2017*.Available from: nrfa.org.zm/wp content/uploads/2019/01/Annual-Report-2014.pdf.[Accessed 18th August, 2018].

OECD, (2003). African Economic Outlokk- Zambia. Available from: https://www.oecd.org/countries/zambia/2497664.pdf [Accessed 20th July,2018].

OECD, (2010). Business climate development strategy: phase 1 policy assessment : Egypt : dimension III-3 : access to finance, Paris.

Ofori, G. (2009). Challenges of Construction Industries in Developing Countries: Lessons from various countries. Available from: http://buildnet.csir.co.za/cdcproc/docs/2nd/ofori_g.pdf [accessed on 15th July, 2018].

Ofori, G. (2012). *Developing the construction industry in Ghana.* Available from: http://www.buildingcontractorsgh.com/Developing%20the%20Construction%20Industry%20in%20Ghana.pdf (Accessed on 15th July, 2018).

Ofori, G., Ali Lin, E.T. and Tjandra, I.K. (2012) Construction Industry Development Initiatives: Lessons for Ghana from some overseas examples, In: *1st International Conference on Infrastructure Development in Africa (ICIDA)*, 22-24.

Ofori, G. (1991) 'Programmes for improving the performance of contracting firms in developing countries', Journal of Construction Management and Economics, Vol. 9, pp.19-38.

Ofori, G. (1991). Programmes for improving the performance of contracting firms

in developing countries: A review of approaches and appropriate options.

Construction Management Economics. 1466-433X. Vol. 9(1): 19-38.

Rabiee, F. (2004). Focus-group interview and data analysis: *Proceedings of the Nutrition Society (2004),* 63, p.655-660.

RDA, (2013). Corporate Magazine. Available from:

www.rda.org.zm>acts>doc_download [Accessed on 21/07/2018].

Raghavan, S. and Kumar, K. (2015). Problems faced by Small Scale Construction Contractors in India. *International Research Journal of Engineering and Technology (IRJET).* 2 (2) pp 105-107.

Phiri, C. (2016).Effectiveness of the Citizens' Economic Empowerment Commission in the disbursement of loans to small and medium scale entrepreneurs.

Phiri, F. (2016). An Analysis of the Twenty Percent Subcontracting Policy in the Zambian Construction Sector: Its Efficacy in Developing Capacities of Local Contractors.

Robert, l., Peurifoy, P.E., Clifford, J., Schexnayder, P.E., Avaial, S. (2006). Construction Planning, Equipment and Methods, International Edition, Seventh Edition, McGraw-Hill, New York.

Saunders, M., Lewis, P. and Thornhill, A. (2012). Research Methods for Business Students. Pearson Education Limited, 6th Ed., Harlow.

Shakantu, W. and Chiocha, C. (2009). Corruption in the construction industry: the case of Malawi. RICS COBRA Research Conference, University of Cape Town, pp 1568-1576.

Shakantu W.M.W., Kajimo-Shakantu, K., Saidi, F. & Mainga, W. (2006). Bridging the informal, formal and indigenous construction knowledge system to resolve the construction skills shortage**,** *4th Postgraduate conference of the CIDB on Construction Industry Development*, Stellenbosch, South Africa, 8 – 10 October 2006; pp. 176 – 182. ISBN No. 0-601-36898-9.

Sibanda, G. (1999). Creating an Enabling Environment for Small-Scale Contractors, Bulletin no. 9, International Labour Organisation/ Advisory Support Information Services and Training for Labour-Based Programmes, Harare, Zimbabwe.

Simumba, D. (2017).The role of Association /Contractors in road water harvesting. Raddison blue Hotel-Lusaka.

South Africa. Department of Public Works, (2001). Code of Good Practice: Mentorship in Engineering and Construction Works Contracts in South Africa. Pretoria: Government Printer.

The green Jobs programme (2014). *An analysis of Zambia's Building Construction Market System.*

Thwala, W.D. and Phaladi, J.P. (2009). An exploratory study of problems facing small contractors in the North West province of South Africa. African Journal of Business Management, 3(10), 533-539.

Thwala, W.D. and Mofokeng, G. (2012).An Exploratory Study of Problems Facing Small and Medium Sized Contractors in the Free State Province of South Africa.

Thwala, W.D.,Mustapha, Z. and Aigbavboa, C.(2018). Small-Medium Sized Contractors' Growth in Cape Coast Metropolis. *Proceedings of the International Conference on Industrial Engineering and Operations Management Washington DC, USA.* Available from*:* http://ieomsociety.org/dc2018/papers/74.pdf [Accessed 26th June, 2019]**.**

Thwala, W.D. and Mvubu, M. (2008). Current challenges and problems facing small and medium size contractors in Swaziland. African Journal of Business Management, Vol. 2 (5) 93-98.

Uriyo, A.G. Mwila, J.and Jensen,L.(2004). *Development of Contractor Registration scheme with a focus on small scale civil works contractors*, final report prepared for National Council for construction Zambia.

Walliman, N. (2001). A Step-by-Step Guide for the first Time Researcher. London: Sage Publications.

Watermeyer. R., Gounden S.M., Letchmiah D.R. and Shezi S. (1998). *Targeted Procurement: A Means by Which Socio-economic Objectives Can be Realised through Engineering and Construction Works Contracts*. Available from: http://dev.sabeex.co.za/papers/RBW%20SAICE98.pdf [Accessed: 06-01-2019].

Watermeyer, R.B., Jacquet, A. & Noyana, C. (2001). Developing the Capacity of Targeted Enterprises in Contractor Development Programmes. In: Regional Conference on Developing the Construction Industries of Southern Africa. Pretoria.

Wellington, J. (2015).*Educational Research: Contemporary Issues and Practical Approaches,* London: Bloomsbury Publishing Plc.

Wijewardena, H. and Tibbis, G.E. (1999). Factors contributing to the growth of small manufacturing firms: Australia. *Journal of Small Business Management, 37(2) Proceedings 4'h Built Environment Conference May 2009.*

Wilkinson, P. and Birmingham, D. (2003) *Using Research Instruments: A Guide for Researchers*. London: Routledge Falmer.

World Bank, (2010). Innovation policy: a guide for developing countries, Washington, DC; Available from:

http://wwwwds.worldbank.org/external/default/WDSContentServer/0PUB0EPI11C10Dislosed061312010.pdf [accessed: 20th November, 2018].

World Bank, (2012). Doing business in a more transparent world, Washington, DC.

Word Bank, (2018). Republic of Zambia Systematic Country Diagnostic. Available from:

http://documents.worldbank.org/curated/en/290011522954283481/pdf/Zambia-SCD-March-29-Final-04022018.pdf [accessed 20th May, 2019].

Zambia Development Agency (ZDA), (2019). Newsletter available from: http://www.zda.org.zm/?q=es/node/386. [Accessed June, 2019].

APPENDIX 1: QUESTIONNAIRE

THE UNIVERSITY OF ZAMBIA

SCHOOL OF ENGINEERING

DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING

Dear Sir/madam,

QUESTIONNAIRE SURVEY ON ESTABLISHING WAYS OF DEVELOPING SUSTAINABLE SMALL AND MEDIUM ENTERPRISE (SME) CONTRACTORS IN ZAMBIA

I am currently undertaking a research on establishing ways of developing sustainable SME contractors in Zambia as partial fulfilment of the requirements for the attainment of Master's Degree in Engineering Construction Management at the University of Zambia.

The aim of the study is to establish ways of developing sustainable SME contractors in Zambia. Everyone stands to benefit from the study as sustainable SME contractors will contribute to the economy of Zambia in many ways.

I would be very grateful if you could kindly complete the attached questionnaire. For any clarifications, kindly get in touch with me on the contact details below. Needless to say, the information provided will be treated with strict confidentiality and names of individual firms will not be identified.

Thanking you in advance for your valuable assistance!

Yours faithfully,

Andrew M'tewa
Email: mtewaandrew@gmail.com
Cell: 0977980286

SECTION A: RESPONDENT'S BACKGROUND

Note: Kindly tick the applicable for each question.

1. Name of organization.....

2. How many years of experience do you have in the construction industry?

0-5yrs	6-10yrs	11-15yrs	15yrs +
[ ]	[ ]	[ ]	[ ]

3. What business in construction is your organization involved in?

Client	Contractor	Consultant	Financial institution	Regulator
[ ]	[ ]	[ ]	[ ]	[ ]

4 In which NCC grade are you registered in? (For contractors only)

G3	G4	G5	G6
[ ]	[ ]	[ ]	[ ]

4 When was the last contract you worked on? (For contractors only)

0-1year	1-2 years	2-3years	over 3years
[ ]	[ ]	[ ]	[ ]

SECTION B CONSTRAINTS AFFECTING SME CONTRACTORS IN ZAMBIA

How would you rank the importance of the following as they are constraints that impede the growth of small and medium scale contractors in Zambia?	**Kindly tick the appropriate boxes** 1=Unimportant, 2=Not important, 3=Averagely important, 4=Important, 5=Very important				
Lack of management skills by SME					
Lack of technical skills by SMEs					
Lack of ICT knowledge					
Failure to provide collateral requirements					
Fluctuations in material prices					
Shortage of construction materials on the market					
Political interference in contract award					
Corruption and bribery					
Difficulty getting jobs					
Shortage of skilled manpower in the industry					
Late payments					
Lack of proper equipment					
Very high interest demanded on loans					
Competition from larger contractors					
difficulties in preparing responsive bids by SME contractors					
Lack of standard contract documentation from client					
Lack of detailed deliberate construction policy to develop SME contractors					
High taxes					
Others, Kindly state them					

SECTION B IMPACT OF CONSTRAINTS ON PERFORMANCE OF SME CONTRACTORS IN ZAMBIA

Note: kindly tick applicable for each given possible outcome in each row.

1). How does difficulty accessing finances affect SME contractors?

	Strongly Agree	agree	neutral	disagree	strongly disagree
Inability to satisfy financial requirements (e.g bid bond, performance bond)					
Failure to purchase proper equipment					
Shoddy works resulting from improper equipment					

2) How does delayed payments affect SME contractors in Zambia?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Inconsistences in Cash flow					
Contractor abandoning work					
Contractor owing bank and defaulting					

3) How does lack of management and technical skills affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Failure to prepare responsive bids					
Shoddy works due to lack of technical know how					
Failure to account for profits and expenses due to lack of management skills					
Business failure due to lack of management skills					

4) How does lack of continuous work opportunities affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree

Underutilization of equipment					
Failure of contractors					
Difficulty retaining competent staff					

5) How does the presence of corruption and political interference affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Difficulty wining contracts by SME contractors					

6) How do uncertainties in supply and price of materials affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Delays in project delivery					
Profitability of SME contractor affected					

7) How does unfair competition from bigger contractors affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Damages prospects and stagnates growth of SME contractors					

8) How does shortage of skilled man power in the industry affect SME contractors?

	Strongly agree	agree	neutral	disagree	Strongly disagree
Shoddy works from SME contractors					
Safety concerns rise					
Rise in costs in delivering projects					

SECTION C IMPACT OF MEASURES PUT IN PLACE BY GOVERNMENT TO PROVIDE AN ENABLING ENVIRONMENT FOR SME CONTRACTORS

Note: Kindly tick applicable in the space provided

1) The 20% subcontracting policy was passed in 2012 in the road sector to help build capacity and create sustainable local SME contractors in Zambia. Has the policy achieved its objectives?

Yes	No
[ ]	[ ]

2) To what extent do you agree with the statement that the 20% subcontracting policy lacks clear implementation modalities?

Strongly agree	agree	Neutral	disagree	strongly disagree
[ ]	[ ]	[ ]	[ ]	[ ]

3) Under Citizen Economic Empowerment (CEE) preferential treatment regulations of 2011, in a bid to empower local companies, state institutions may in evaluating a bid, adjust the bid price in order to facilitate preferential evaluation of a bid as follows: 4% for a citizen influenced company, 8% for a citizen empowered company and 12% for a citizen owned company. In your opinion to what extent is this being adhered to?

0-25%	25-50%	50-75%	75-100%
[ ]	[ ]	[ ]	[ ]

4) The preferential treatment regulation mentioned in Q3 has helped develop SME contractors in Zambia. To what extent to you agree with the statement?

Strongly agree	agree	Neutral	Disagree	strongly disagree
[ ]	[ ]	[ ]	[ ]	[ ]

5) Under the CEEC reservation scheme, in a bid to empower local companies, state institutions shall reserve a public procurement for a citizen influenced company, citizen empowered company or citizen owned company for values up to K20million for building works and procurements up to K30million for civil and road works.In your opinion to what extent is this being adhered to?

0-25%	25-50%	50-75%	75-100%
[ ]	[ ]	[ ]	[ ]

6) The reservation scheme mentioned in Q5 has helped develop SME contractors in Zambia. To what extent do you agree with the statement?

Strongly agree	Agree	neutral	disagree	strongly disagree
[ ]	[ ]	[ ]	[ ]	[ ]

7) Government introduced the Construction Finance Initiative (CFI) in the road sector at the beginning of 2013 a policy aimed at assisting the small and medium scale contractor's access finances from banks.

Do you know about the CFIs in the road sector?

Yes	No
[ ]	[ ]

8) If your answer to Q7 is yes, have CFIs helped to develop SME contractors in the road sector so far?

Yes	No
[ ]	[ ]

SECTION D MEASURES IMPORTANT IN THE DEVELOPMENT OF SME CONTRACTORS

How would you rank the importance of the following as measures that can help in the growth of sustainable small and medium scale contractors in Zambia?	**Kindly tick the appropriate boxes** 1=Not very important, 2=Not important, 3=Averagely important, 4=Important, 5=Very important				
More efficient and decentralized payment procedures					
Improved access to materials					
Clearly defined subcontracting policies in entire construction sector					
Incentives for small firms to team up					
More Training and advisory services					
Much efficient contractor registration					
Lower retention monies					
Standardization of contract documents					
Tendering preferences					
More contractor development programmes					
Provision of mobilization allowances					
Establishment of construction bank for SME					
Provision of material/loan guarantees by contracting agencies to suppliers/banks					
Provision of tax incentives					
Provision of vocational training to build capacity					
Access to equipment through hire purchase					
Others kindly state them					

THANK YOU FOR YOUR TIME

APPENDIX 2: INTERVIEW GUIDE

STRUCTURED INTERVIEW QUESTIONS

The purpose of this research is to identify the constraints to contractor development in Zambia, establish their impact on the development of contractors, identify and assess the impact of measures by government to promote growth of SME contractors and finally determine ways of developing sustainable contractors in Zambia

1 What business in construction is your organization involved in?

……

2 How many years of experience do you have in the construction industry…….

3 Kindly give two (2) benefits if any of SME contractors being registered with NCC?

……
……
……

4 Has restriction of registration of foreign contractors to NCC grade 1 and 2 helped in developing local contractors? If not kindly give reasons

……
……
……
……

5 In your opinion would you say SME contractors lack effective technical and management skills? YES or NO

6 If yes how has it hampered growth of SME contractors?

……
……
……
……

7 Are there problems of difficult accessing finances from financial institutions by SME contractors in Zambia? YES or NO

8 If yes how has this affected performance of SME contactors?

……
……
……
……

9 In your opinion how can government assist SME contractors in accessing finances?

……
……
……
……

10 Are there problems of late payments in the industry? YES or NO

11 If yes how have late payments impacted on the performance of SME contractors?

……
……
……
……

12 If your answer to Q11 was YES, how can late payments best be addressed in your opinion to help SME contractors?

……
……
……

13 Do local contractors have difficulties accessing proper equipment? YES or NO

14 If not how does lack of proper equipment affect performance of SME contractors?

……
……
……

15 If your answer to Q13 is NO, what can be done to assist SME contractors have access equipment?

……
……
…….

16 The 20% subcontracting policy was passed on July 2012 with the objective of empowering local contractors, create jobs for Zambian citizens; create sustainable local contracting capacity; and upgrade local contractors from grade six through to one. Do you think the policy has achieved its intended purpose? YES or NO

17 If not what is needed if the policy is to achieve its objectives?

……
……
……
…….

18 Under Citizen Economic Empowerment Commission preferential procurement regulations of 2011, in a bid to empower local companies, state institutions may in evaluating a bid adjust the bid price in order to facilitate preferential evaluation of a bid as follows: 4% for citizen influenced company, 8% for a citizen empowered company and 12% for a citizen owned company. Would you say this act has been adhered to?

19 If not what can be done to ensure adherence?

……
……
……

20 What are some of the deliberate policies and measures in place to encourage and promote growth and development of SME scale contractors?

……
……
……

21 How have the measures listed in Q19 impacted growth of SME contractors in Zambia?.....
.....
.....

22 In your opinion what other stakeholders apart from government are needed in the development of SME contractors in Zambia?

……
……
…….

24 How can the stakeholders mentioned in Q24 help in the development of SME contractors?

……
……
……

THANK YOU FOR YOUR TIME