

**FACTORS INFLUENCING PERFORMANCE OF SMALL
AND MEDIUM BUILDING CONSTRUCTION
ENTERPRISES IN EMBU COUNTY, KENYA**

BY
KARI A FREDRICKINDAIRE.

A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE AWARD OF THE MASTER OF ARTS
DEGREE IN PROJECT PLANNING AND MANAGEMENT OF UNIVERSITY
OF NAIROBI

2012

DECLARATION

This Research Project Report is my original work and has not been submitted for an award of a degree in this or any other University

Signature..... Date..... !j

Karua Fredrick Ndaire

L50/64801/2010

This Research Project Report is submitted for examination with my approval as the University supervisor.

Signature C..... Date.. ^ T . j . k l . ^

Ms.Edith M. Kimani

Lecturer, Department of Extra Mural Studies

University of Nairobi

DEDICATION

I dedicate this Research to my wife, Christine, for your patience and all the support you have offered me. To my children Melissa, Nelly, and Rita, you are an inspiration. I adore and love you all.

ACKNOWLEDGEMENT

I wish to acknowledge The Almighty God, His grace and the gift of life. Special thanks go to my supervisor, Ms Edith Kimani for the patience and keen interest in my Research Project. Your creative insight and mentorship has kept me focused. Next I wish to acknowledge the co-operation and kind understanding of my family and also friends for support.

I wish to appreciate colleagues at the Ministry of Public Works, Nairobi and in the field who have assisted me at various stages of this master's programme. Last but not least I wish to acknowledge Ms. Lucy Wamai who has assisted me in preparing the document in readiness for presentation.

TABLE OF CONTENT

	Page
TITLE PAGE.....	1
DECLARATION.....	"
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
TABLE OF CONTENT.....	v
LIST OF TABLES.....	vi
LIST OF FIGURES.....	ix
ABBREVIATIONS AND ACRONYMS.....	x
ABSTRACT.....	xi
<i>—</i>	
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study.....	5
1.4 Objectives of the Study.....	5
1.5 Research Questions.....	5
1.6 Significance of the Study.....	6
1.7 Delimitations of the Study.....	6
1.8 Limitations of the Study.....	7
1.9 Assumptions of the Study.....	7
1.10 Definition of Significant Terms.....	7
CHAPTER TWO: LITERATURE REVIEW.....	9
2.1 Introduction.....	9
2.2 The Case of Small and Medium Enterprises.....	9
2.2.1 Small and Medium Construction Enterprises.....	11
2.2.2 Challenges Facing Small and Medium-Sized Construction Enterprises.....	13
2.2.2.1 Technical Skills.....	14
2.2.2.2 Management Skills.....	15
2.2.2.3 Access to Capital.....	16
2.2.2.4 Tendering Procedures.....	17
2.3 Roles, Development and Growth of SMCEs.....	19
2.3.1 Integrated Emerging Contractor Development Model (IECDM).....	20
2.4 Empirical Literature Review.....	21
2.5 Summary of Literature Review.....	23
2.6 Study gap to be filled.....	23
2.7 Conceptual Framework.....	24
2.7.1 Relationship between Variables.....	26

2.7.1.1 Technical Skills.....	26
2.7.1.2 Management Skills.....	26
2.7.1.3 Access to Capital.....	26
2.7.1.4 Tendering procedures.....	26
CHAPTER THREE: RESEARCH METHODOLOGY.....	27
3.1 Introduction.....	27
3.2 Research Design.....	27
3.3 Target Population.....	27
3.4 Sampling and Sampling Procedures.....	27
3.4.1 Sample Size.....	28
3.4.2 Sampling Techniques.....	28
3.5 Data Collection Instruments.....	29
3.5.1 Piloting of Instruments.....	29
3.5.2 Validity of the Instrument.....	29
3.5.3 Reliability of the Research Instrument.....	30
3.6 Data Collection Procedures.....	30
3.7 Data Analysis Techniques.....	30
3.8 Ethical Considerations.....	31
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND	
INTERPRETATION	33
4.0 Introduction.....	33
4.1 Response rate of the study.....	33
4.2 Background of the respondents	34
4.2.1 Gender profile of the respondents.....	34
4.2.2 Highest education qualification	34
4.2.3 Category of registration.....	35
4.2.4 Age of respondents.....	36
4.2.5 Cross tabulation of category of registration and highest education level	36
4.3 Presentation of analysis according to research questions.....	37
4.3.1 Influence of technical skills on performance of small and medium construction Enterprises.....	38
4.3.2 Management of technical records.....	38
4.3.3 Contribution of technical skills to performance of SMCEs.....	39
4.4 Influence of management skills on performance of small and medium construction enterprises.....	40
4.4.1 Use of strategic plans.....	40
4.4.2 Human resources planning.....	40
4.4.3 Capital asset inventory control register.....	41
4.4.4 Delegation of duties.....	42
4.4.5 Contribution of management skills.....	43

4.5 Influence of access to capital on performance of small and medium construction enterprises.....	43
4.5.1 Challenge in accessing working capital.....	43
4.5.2 Challenges to accessing capital assets finance.....	44
4.5.3 Missed bidding due to insufficient funds.....	45
4.5.4 Access to business capital.....	46
4.6 Influence of tendering procedures on performance of small and medium construction enterprises.....	46
4.6.1 Records registry.....	46
4.6.2 Effectiveness of the records management system when tendering.....	47
4.6.3 Ability to bid for higher value contracts.....	48
4.6.4 Challenges faced by SMCEs when tendering for new contracts.....	48
4.6.5 Tendering and business performance.....	49
4.7 Growth of small and medium construction enterprises.....	50
4.7.1 Growth of Business in performance capability.....	50
4.7.2 Growth of business in registration status.....	51
4.8 Influence of the study variables on the performance of SMCEs.....	51
4.9 Qualitative Analysis.....	52
4.10 Summary of Data Analysis.....	53
CHAPTER FIVE: SUMMARY OF THE FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS OF THE STUDY.....	54
5.1 Introduction.....	54
5.2 Summary of Findings.....	54
5.3 Discussion of the Findings.....	54
5.4 Conclusions of the Study.....	56
5.5 Recommendations of the Study.....	56
5.6 Suggestions for further Studies.....	58
REFERENCES.....	59
APPENDICES.....	71
Appendix I: Letter of Transmittal on Data Collection Instruments.....	71
Appendix II: Questionnaire for Owners of The Small and Medium Construction Enterprises.....	72
Appendix III: Krejcie and Morgan Sample Size Table.....	77
Appendix IV: National Council for Science And Technology Authorization Permit Letter	78

LIST OF TABLES

	Page
Table 1.1: Statistics of Registered Building Contractors.....	3
Table: 2.1 Class limits for Various Types of Building Contractors.....	12
Table: 3.1 Sampling Frame.....	28
Table: 3.2 Sampling Table.....	28
Table 3.3: Operational definition of Variables.....	32
Table 4.1: Response Rate.....	33
Table 4.2: Gender of Respondents.....	34
Table 4.3: Highest Education Level.....	34
Table 4.4: Category of Registration.....	35
Table 4.5: Age of Respondents.....	36
Table 4.6: Cross Tabulation of Category of Registration and Highest Education Level	37
Table 4.7: Possession of Technical Skill.....	38
Table 4.8: Management of Technical Records.....	38
Table 4.9 Contribution of Technical Skills to Performance of SMCEs.....	39
Table 4.10: Use of strategic plans in managing performance.....	40
Table 4.11: Extent of Planning Human Resources.....	41
Table 4.12: Existence of capital assets inventory control registers.....	41
Table 4.13: Extent of Delegation of Duties.....	42
Table 4.14: Contribution of management skills to business performance.....	43
Table 4.15: Extent of Challenge to accessing working capital.....	44
Table 4.16: Extent of Challenges Accessing Capital Asset Finance.....	44
Table 4.17: Missed Biddings due to insufficient funds.....	45
Table 4.18: Constraint by Access to Business Capital.....	46
Table 4.19: Existence of a Records Registry.....	47
Table 4.20: Effectiveness of your Management System.....	47
Table 4.21 Ability to Bid for Higher Bids in the Last One Year.....	48
Table 4.22: Challenges faced by SMCEs when Tendering for New Contracts.....	48
Table 4.23: Extent of Tendering Facilitating Business Performance.....	49
Table 4.24: Growth of Business in Performance Capability.....	50
Table 4.25: Growth of Business in Registration Status.....	51
Table 4.26 Weighted Influences of the Study Variables on the Performance of SMCEs	52

LIST OF FIGURES

Page

Figure 1: Conceptual Framework.....25

ABBREVIATIONS AND ACRONYMS

BIM- Building Information Modeling

CETA- Construction Education and Training Authority

CIDB- Construction Industry Development Board

DBSA- Development Bank of Southern Africa

ECDM- Emerging Contractor Development Programme

GDP-Gross Domestic Product

GOK-Government of Kenya

IDRC- International Development Research Center

IECDM- Integrated Emerging Contractor Development Programme

ILO- International Labour Organization

KABCEC - Kenya Association of Building and Civil Engineering Contractors

KNBS-Kenya National Bureau of Statistics

MOPW- Ministry of Public Works

NDS-National Development Strategy

NQF-National Qualification Framework.

OECD-Organization for Economic Cooperation and Development.-

PPOA -Public Procurement and Oversight Authority

SADC-Southern Africa Economic Community

SMCEs- Small and Medium Construction Enterprises

SMEs- Small and Medium Enterprises

TQM- Total Quality Management

US S-United States Dollars

ABSTRACT

Several studies have identified the Construction Industry as one of the main engines of performance in any economy. On supply side of the industry are Small and Medium Construction Enterprises (SMCEs) which form an important sector of any construction economy. The need for efficient SMCEs is well documented and cannot be over-emphasized. SMCEs are vital in their contribution to employment creation and value re-orientation. There are a number of SMCEs in Kenya but much more important than their number is their current status, stage and pace of development. . The process of performance of these enterprises needs to be well understood and addressed. The objective of this study was to establish some of the factors influencing the performance of SMCEs in Embu County. The target population was 120 SMCEs registered by Ministry public works and with physical address in Embu County. The methodology used included an extensive literature review and field survey conducted on 68 SMCEs. The field survey used the questionnaire instrument and stratified random sampling. The findings from the literature are that there are binding constraints in the performance of SMCEs. The field survey confirmed the issues raised in the literature and posited the challenges to performance as lack of capital, technical skills and tendering procedures. Management skills were found not to have much influence on performance of SMCEs. The implication of the findings is that the challenges named above need to be addressed if the SMCEs in Embu County will perform and become more competitive. The recommendations include developing training programmes for SMCEs, introduction of sector specific financing programmes and provision of appropriate regulatory framework. The findings of this study make a contribution to the search for solutions to the problems facing the performance of SMCEs in Embu County and provide insight for further research in this sector.



CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Several studies have identified the Construction Industry as one of the main engines of performance in any economy. It provides the infrastructure required for other sectors of the economy to flourish, provides housing as the basic human need and is instrumental in providing national communications network (Jaafar & Abdul-Aziz, 2005). The Construction Industry also provides significant Employment opportunities at non-skilled and skilled levels. When it comes to the nation's gross fixed capital formation, the Construction Industry provides over 50% of the national long-term assets (Construction Education and Training Authority [CETA], 2005).

There are some serious challenges facing the construction industry that are motivating new approaches to how to design, build, operate, and maintain buildings and infrastructure (Ngala, Adegoke & Otiena, 2005). While new technologies are designed to address challenges in the construction industry, they are going to profoundly affect other sectors such as operations and maintenance, emergency planning, first response and urban planning (Construction Industry Development Board [CIDB], 2004). These challenges are therefore motivating the adoption of new technologies such as; Three Dimension(3D) rendering and simulation, model-driven design including Building Information Modeling (BIM) and standards for interoperability businesses (Ngala et al, 2005).

Dlungwana and Rwelamila (2003) state that contractors can be distinguished from each other by variables such as the size of annual turnover, capacity and capability. The challenges facing small contractors can be distinguished between those that affect medium-sized contractors. Some key features of small-scale contractors are that they are largely unregistered, operate in the informal sector of the economy and have very little formal business systems (Jaafar & Abdul-Aziz, 2005). The small-scale sector comprises the largest percentage of total contractors, although they employ very few permanent staff, usually less than ten employees. According to the current Ministry of Public Works

of Kenya, 2011 Registered of Building Contractors, 66% are registered as Small Scale contractors in Classes H, G and F (Source; MOPW, 2011).

The conditions in developing countries present additional challenges, which include, amongst others, the lack of resources for training contractors, such as funds, poor construction procurement systems and lack of management capacity and resources to equip managers to operate their business enterprises effectively and efficiently (CIDB, 2004).

Small and medium contractors are facing increased competition due to the long-term real decline in demand, and many contractors have responded by shedding labour (Storey, 1994). The larger contractors have also responded by moving into the international market. Small local contractors, in particular, are furthermore subject to volatilities due to the geographic distribution of construction and the peak workloads that characterize construction projects, which has further reduced their ability to build capacity (Ngala et al, 2005).

Lack of effective management during their early stages is a major cause of business failure for small and medium sized contractors (Ngala et al, 2005). Owners tend to manage their businesses themselves as a measure of reducing operational costs. 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 a lack of the basic business management skills. Most business people, therefore, end up losing track of their daily transactions and cannot account for their expenses and their profits at the end of the month (Jaafar & Abdul-Aziz, 2005).

Small And Medium Construction Enterprise business sector consists of either family owned business employing a few people or self employed people. The small and medium size contractor is a typical sole proprietorship firm or in many cases a family owned business with a few foremen and mostly casual labor as needed. According to Njuguna (2008) small scale contractors handle small projects up to us\$ 1 million. Medium scale contractors handle medium contracts from USS 1-10 million. The types of contractors are contrasted from large contractors handling large unlimited contracts. The following is the national tally and the Embu registered building contractors (Table 1.1).

Table 1.1: Statistics of Registered Building Contractors

Category	National	%	Embu	%
A	164	4	0	0
B	121	3	0	0
C	209	5	6	5
D	341	7	4	3
E	682	15	12	10
F	1073	23	22	18
G	1628	35	60	50
H	384	8	16	14
Total	4602	100	120	100

Source: MOPW (2011)

Among the Registered Contractors in Embu County; 82 % are Small Scale Contractors in Classes F, G and H while Medium Scale Contractors-Classes E, D, C form 18 %. In a nutshell, all registered contractors located in Embu County are SMCEs (Table 1.1). The National tally is 66 % and 27 % respectively. According to Sentongo (2005) about 70 % of Class A contractors are the domain of multi-national firms with the Local citizens being predominantly in the lower Classes carrying out small projects. Nevertheless, the important role performed by SMCEs cannot be overlooked. According to Kayanula and Quartey (2000:3), and Dlungwana and Rwelamila (2003), "the dynamic roles of SME contractors in developing countries cannot be overemphasized. Such enterprises have been identified as the means through which the rapid industrialization and other developmental goals of these countries can be realized". It is therefore of national importance the sector is run competently at all levels. This study investigated factors influencing performance of small and medium Construction Enterprises in Embu County.

1.2 Statement of the Problem

Small and Medium Construction Enterprises (SMCEs) face a host of constraints and challenges. Many citizens have condemned some of the work carried-out by SME Contractors and this is largely blamed on the many limitations SMCEs are facing.

However the Government is advocating the formation Small and Medium Enterprises (SMEs) with an aim of reducing unemployment and to accelerate infrastructure development (Chilipunde, 2010)..

While (Day, 1997; Winter and Preece, 2000) state that the ability of a contractor to maintain good relationship with clients, suppliers, and other role players is a critical success factor in the performance of Small Medium Enterprises (SMEs), Upson (1987) insists on the ability for financial gathering and management as critical success factor in the performance of SMEs for small, medium and large contractors.

SMCEs lack management skills. Management expertise is claimed to be one of the scarcest resource in the construction industry (Myers, 2004 citing Hillebrandt, 2000, and Ramokolo and Smallwood, 2008). The lack of managerial know-how places significant constraints on SMCEs' development and growth (Kayanula & Quartey, 2000, and Ramokolo & Smallwood, 2008)

Inadequacy in technical skills required in project implementation; insufficient knowledge, time and experience required for the whole process of finding work, once found, insufficient understanding of the contract documentation and the preparation and submission of tenders pose a challenge to SMCEs (Chilipunde, 2007).

Some contractors are challenged by tendering requirements in the standard contract documents that call for high levels of bid bonds and performance bonds which leave the contractors gasping for financial breathe, especially when they have to bid for several projects in a row, each of them with the same independent requirements (Chilipunde, 2010). SMCEs may need assistance with training in tendering procedures and relaxation of sureties and performance bonds, in view of the relatively small value of their work (Sibanda, 1998)

There are various issues and critical factors affecting the performance of the SMCEs which need to be appreciated and addressed by the stakeholders. There is much literature (winter & Preece, 2000), to show concern for the Challenges Facing Small and Medium Building Construction Enterprises internationally. However, there seems to be little study on the Challenges Facing Performance of Small and Medium Sized Contractors in Kenya and no specific study have been found to address Embu County in

particular among the Registered Building Contractors in that County, as this study intends to do.

1.3 Purpose of the Study

The purpose of this study is therefore to investigate factors influencing performance of Small and Medium Construction Enterprises in Embu County.

1.4 Objectives of the Study

The study shall be guided by the following objectives so as to clarify the factors influencing performance of small and medium building construction enterprises in Embu County;

1. To establish the influence of Technical Skills on the performance of Small and Medium Building Construction enterprises in Embu County.
2. To determine the influence of Management Skills on the performance of Small and Medium Building Construction enterprises in Embu County.
3. To find out the influence of Access to Capital on the performance of Small and Medium Building Construction enterprises in Embu County.
4. To establish the influence of Tendering Procedures on the performance of Small and Medium Building Construction enterprises in Embu County.

1.5 Research Questions

This study was guided by the following questions;

1. To what extent does Technical Skills influence on the performance of Small and Medium Construction enterprises in Embu County?
2. To what extent does Management Skills influence the performance of Small and Medium Construction enterprises in Embu County?
3. To what extent does Access to Capital influence the performance of Small and Medium Construction enterprises in Embu County?
4. To what extent does Tendering Procedures influence the performance of Small and Medium Construction enterprises in Embu County?

1.6 Significance of the Study

It is generally accepted that the growth of a country is measured by the advances in its infrastructure. The construction industry is therefore a vital component in the development of every nation. The Kenya Government has affirmed this concept by establishing the national construction authority (NCA) through the National Construction Authority Act (2011), to oversee the construction industry. The NCA, it is assumed, through processing of information and evolution of organizational machinery will ensure effectiveness and efficiency in the Kenya Construction Industry.

The study will be beneficial to the Government as it will contribute to the overall performance of the construction industry and hence performance in the National Income through the performance in scope of the contracts that local firms will be bidding for. SMCEs in the construction industry have a direct impact on skilled and unskilled employment. It is therefore important that constraints contractors face are identified and analyzed to ensure that unemployment is reduced to acceptable levels and also to ensure that structures erected are worth their value for money.

This study will also benefit the individual contractors as they will be able to address the potential challenges from an informed position and avoid them or devise strategies on how to overcome them. The study will facilitate future research on Construction Industry by providing future scholars with a basis for reference. Finally the study will add to the existing body of knowledge.

1.7 Delimitations of the Study

Building and Civil Engineering contractors in Kenya are grouped by the Ministry of Public Works according to experience, financial capabilities and technical skills from the lowest grade H to the highest grade A (Table 1.1). This study investigated Small and medium sized Building Firms registered by the Ministry of Public Works (Kenya) and located in Embu County as per their registration particulars.

The respondents for this Study were Owner-Managers of the SMCEs are registered in classes H to B as per the current MOPW Register updated in 2011. Contractors are not allowed to tender for Government projects the cost more than the category in which they fall.

Embu County has among the lowest transition rate from the lower categories to higher grades. Among the 120 registered Contractors in Embu County; 82 % are Small Scale Contractors in Classes F, G and H while Medium Scale Contractors-Classes E, D, C form 18 %.In a nutshell, all registered contractors located in Embu County are SMCEs. The National tally is 66 % and 27 % respectively.

1.8 Limitations of the Study

Due to the limitations of time and resources the research has been narrowed to cover the Small and Medium Size MOPW registered Building Construction Enterprises in Embu County, though the research would have benefited with a wider scope of all the contractors in the construction industry within Embu County.

1.9 Assumptions of the Study

The assumption of the study was that the respondents of this study would be willing to give complete responses and do that truthfully. It also assumed the MOPW and other stakeholders will make use of the findings of the study.

1.10 Definition of Significant Terms

Construction: In the field of Architecture and Civil Engineering, Construction is a process that consists of the building or assembling of infrastructure. Large scale construction is a feat of human activity. Building construction is the process of adding structure to real property.

Construction Industry: A sector which offers services that produce a construction product.

Infrastructure: Infrastructure refers to economic services from utilities such as electricity, gas, telecommunications, and water and transport works such as roads, bridges, urban transit systems, seaports, and airports, which are central in promoting economic activities in the country.

Contractor: A contractor is a practitioner who is authorized to execute projects conceptualized and designed by consultants and under their supervision. According to National Construction Authority Act, 2011, a person carries on business as a contractor where such a person for reward or other valuable consideration undertakes the construction, installation or erection for any other person, of any structure situated below, on or above ground or other work connected therewith, or execution, for any other person, of any alteration or otherwise to any structure or other work connected therewith and , undertake to supply necessary materials and labour. They are typically categorized as local or multi-national. The locals being further categorized as National or Regional.

Small And Medium Construction Enterprises: Small And Medium Construction Enterprises (SMCEs) shall mean contractors in class B, C,D,E,F,G and H in civil and building categories as prescribed by the MOPW. Small sized enterprises shall be of class H, G and F while medium sized enterprises shall be of class E, D, C and B.

Performance: In this study performance of small and medium contractors refers to the ability of the individual contractor to bid for a higher value contracts over a given duration of practice in the industry. The SME's progressing up the grading system will demonstrate financial capability and an expansion of the value of work and complexities in projects which they are able to undertake.

Foreign contractors: In this study, foreign contractor are those contractors who are not from Embu County as per their registration particulars, but bid for contract works in Embu county bringing skilled and unskilled manpower from without the county.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers the review of theories and related literature by other authors that would add to a clearer understanding of the study and the study variables in particular. The chapter shall also present Empirical review of literature and a conceptual framework to support.

2.2 The Case of Small and Medium Enterprises

The importance of Small and medium enterprises (SMEs) to world economies is well documented (Birch 1989; Storey 1994). SMEs (firms with 200 or less employees) make up the largest business sector in every world economy (Culkin & Smith 2000), and governments around the globe are increasingly promoting and supporting SME growth as part of their overall National Development Strategy (NDS) (Abdullah & Bakar, 2000). While they dominate in terms of absolute numbers, SMEs are also important because they are key drivers of employment and economic growth.

At a macro level, SMEs have created the majority of new jobs in Organization for Economic Cooperation and Development (OECD) countries since the 1970s (Peacock, 2004) and their collective contributions to respective Gross Domestic Products (GDPs) (e.g., approximately 30% in Australia and New Zealand, 51% in the UK and USA, 57% in Canada and Japan, 76% in Luxembourg) belie their individual small size (Ayyagari, Beck & Demirguc-Kunt, 2003). At a micro level, SMEs are popularly looked upon by governments as a keystone to regional economic and community regeneration.

Since the early 1980s, considerable restructuring particularly in large firms (for example, rationalizing, downsizing, outsourcing and job exporting) has seen a general shedding of jobs (Storey, 1994). It is primarily through the growth of SMEs that employees made redundant by large firms have been absorbed back into the work force (Storey 1994; Frank & Landstrom, 1998). Through a multiplier effect, this employment provides income to regions which stimulates local economic activity which in turn, drives wealth and further creation of employment (Walker & Webster, 2004).

In contemporary commerce, SMEs dominate many important industry sectors such as retailing, service and construction; and form crucial forward and backward links in the supply chain of large scale capital intensive manufacturing industries such as automotive, mining, and marine and defence (Abdullah, 2000; Robinson & Pearce, 1984; Wang, Rowe & Cripps, 2006). Additionally, their presence alongside large firms provides important competitive and structural balance to industries and marketplaces that would otherwise be dominated by a few large players (Beaver & Jennings, 2000; Peacock, 2004).

In terms of entrepreneurial activity, SMEs often occupy fragmented or niche markets which large firms either cannot economically enter or are reluctant to enter because of 'unattractive' risk-return considerations (Brouthers, Andriessen & Nicolaes, 1998). And despite their generally limited capacity for research and development (R&D) investment, SMEs contribute positively and disproportionately to innovative activity (Acs & Audretsch, 1990). For example, Peacock (2004) reported that SMEs in Australia contributed 54% of all 'significant technological innovations' even though their share of R&D investments represented just 20% of technical innovation expenditure. Perhaps as a result of the association with entrepreneurial activity and innovation, SMEs serve an important 'seedbed' role for the growth of new industries and the establishment of future large companies (Howard, 1997). The overall importance of SMEs is summarized by Ibielski (1997 quoted in Hashim and Abdullah, 2000, p. 193) as follows:

SMEs] are mighty minnows, reflecting the competitive spirit that a market economy needs for efficiency; they provide an outlet for entrepreneurial talents, a wider range of consumer goods and services, a check to monopoly inefficiency, a source of innovation, and a seedbed for new industries; they allow an economy to be more adaptable to structural change through continuous initiatives embodying new technologies, skills, processes or products.

In Kenya, the SMEs play an important role in employment and wealth creation, income distribution, accumulation of technological capabilities and spreading the available resources among a large number of efficient and dynamic small and medium size enterprises (International Development Research Center [IDRC], 1993). According

to the Economic Survey (GOK, 2009), the SME sector contributed 79.8% of new jobs created in that year in Kenya. Consequently, the Kenya's development plans for the 1989-1993, 1994-1996 and 1997-2001 periods put special emphasis on the contribution of small and medium size enterprises in the creation of employment in the country (GOK, 1989, 1994, 1997).

It is common knowledge that organizations, large and small alike, struggle to develop in an external operating environment which is characterized by turbulence and uncertainty. Among the challenges in the Kenyan Environment that limit SMEs performance includes the lack of access to credit, management skills, communication and infrastructure. Lack of managerial accounting skills for decision making and lack of technical skills are as much obstacles to developing a small business as is the inability to access credit (Mbogo, 2011).

2.2.1 Small and Medium Construction Enterprises

Dlungwana and Rwelamila (2003) states that contractors can be distinguished from each other by variables such as the size of annual turnover, capacity and capability. For most public procurement processes of most countries, for example, construction enterprises are classified using the maximum value of a project that an enterprise can execute. The classification is made by assessing their financial resources, that is, in terms of bank balance, or their ability to access credit and short term investments; assets or guarantees to accessing assets like plant and equipment; human resources particularly in terms of expertise and skills; and experience relating to past projects executed and associated performance arising thereof (Ssegawa,2008).

A typical example of such classification is that used by ministry of Public works of Kenya (MOPW, Kenya). It classifies enterprises or contractors in classes A, B, C, D, E, F, G, and H for the purposes of procurements (Table 2.1). H is lowest class while A is highest class of any of the eight categories of contractors namely, building and civil, and electrical and mechanical contractors. The class thresholds are different in each category, for example, maximum value for Class B is Kenya shillings five hundred million for civil and building, and Kenya shillings two hundred and fifty million for electrical/mechanical contractors, respectively (Table 2.1). Civil engineering projects are usually large,

expansive and expensive and hence the high thresholds in the group. On the other hand, most of the electrical and mechanical work is sub-contracted on a project and hence the value of their work is only a fraction of the tender sum.

Table 2.1: Class limits for Various Types of Building Contractors

Classification of General Contractors		Classification of Specialist Contractors	
Category	Class Limit (Kshs)	Category	Class Limit (Kshs)
A	Unlimited	A	Unlimited
B	Up to Kshs.500,000,000	B	Up toKshs.250,000,000
C	Up to Kshs.300,000,000	C	Up toKshs. 150,000,000
D	Up to Kshs.200,000,000	D	Up toKshs. 100,000,000
E	Up to Kshs. 100,000,000	E	Up to Kshs. 50,000,000
F	Up to Kshs. 50,000,000	F	Up to Kshs. 20,000,000
G	Up to Kshs. 20,000,000	G	Up to Kshs. 10,000,000
H	Upto Kshs. 10,000,000	H	Up to Kshs. 5,000,000

(Source: MOPW, 2012)

It is important to relate the classes to the generic sizes (micro, small, medium and large) and small and medium classes which are used in the study. MOPW does not use the sizes referred to as Micro, Small, Medium or Large sizes but some inference is made for the research study as to which class belongs to which size. The right hand side of Table 2.1 shows the size determination made in the study to group classes B, C,D,E,F,G and H as SMCEs and A as large enterprises category of work (building and civil).

Currently the department also determines the classification on behalf of Public Procurement and Oversight Authority (PPOA) of Kenya. Firms in class A are quite big by the standards of the construction industry. About 70% are multi-national firms or are branches of multi-national enterprises (Sentongo, 2005). Their profile varies considerably from other classes, for example, they are well resourced in terms of finance, equipment,

plant and personnel. They have significant experience in terms of executing construction jobs and it is no surprise that most are registered for both building and civil engineering category of work. Therefore, the reason for excluding class A is the high disparity in the profile of their resources, operations and systems (Ssegawa, 2008).

That observation leads to another issue. It is quite in order to give an indication as to which of the four groups (building, civil, electrical and mechanical contractors) are relevant to the study. Only contractors registered for building and civil works are included in the study leaving the electrical and mechanical contractors out. The reason is that owners of building and civil contractors are of varying backgrounds; some are educated while others are not; some had technical knowledge in some aspects of the built environment prior to their entry in the industry, while others did not (Sentongo, 2005).

Ssegawa (2008) in a study on SMCEs in Botswana noted that a vast majority of electrical and mechanical contractors are proprietors with a good technical background in their trade, perhaps varying in-depth in terms of qualifications and managerial experience. Most are usually diploma or degree holders in aspects related to electrical, electronic or mechanical work. The other persuasive factor for excluding mechanical and electrical contractors from the study is the level of their involvement in a project. Compared to building and civil contractors, their participation is normally limited to sub-contracting (nominated or domestic). If they were included in the study, the mix would not be a homogeneous group of subjects which Blumberg (2003) observed must be treated with care in order to obtain valid results.

In view of the above discussion and description, small and medium construction enterprises (SMCEs) shall mean contractors in class B, C, D, E, F, G and H in civil and building category as prescribed by the MOPW. Small sized enterprises shall be of class H, G and F while medium sized enterprises shall be of class E, D, C and B.

2.2.2 Challenges Facing Small and Medium-Sized Construction Enterprises

The challenges facing small and medium-sized contractors can be distinguished between those that affect small-scale contractors and those that affect medium-sized contractors. (Dlungwana & Rwelamila, 2003).

Some key features of small-scale contractors are that they are largely unregistered, operate in the informal sector of the economy and have very little formal business systems.

The small-scale sector comprises the largest percentage of total contractors, although they employ very few permanent staff, usually less than ten employees. The conditions in developing Countries present additional challenges, which include, amongst others, the lack of resources for training contractors, such as funds, poor construction procurement systems and lack of management capacity and resources to equip managers to operate their business enterprises effectively and efficiently (Dlungwana & Rwelamila, 2003).

There are a large numbers of small contractors entering at the lower end and this sector has become extremely competitive, thereby making it difficult for new entrants to keep a sustainable workflow. This inability to sustain workflow impacts on their ability to achieve sustainable employment and economic empowerment (CIDB, 2006).

Small and medium contractors are facing increased competition due to the long-term real decline in demand, and many contractors have responded by shedding labour. The larger contractors have responded by moving into the international market (Thwala & Phaladi, 2009). Small local contractors, in particular, are furthermore subject to volatilities due to the geographic distribution of construction and the peak workloads that characterize construction projects, which has further reduced their ability to build capacity. Emerging contractors are subject to the same market forces described above for small contractors. However, while emerging contractor development policies were intended for economic empowerment (Thwala & Phaladi 2009), Small government contracts have in fact been used as job creation opportunities (International Labour Organization [ILO], 2011).

2.2.2.1 Technical Skills

Developing countries are characterized by a systematic under-investment in human capital. This has resulted in a labour force with a skewed distribution of craft skills, career opportunities and work-place experience (Croswell & McCutchen, 2001). While the promulgation of the South Africa's Skills Development Act of 1997 is commendable, micro-enterprises already express concern about the administration costs

of recovering levies in the form of grants for training undertaken, the costs of designing a workplace training programme as an alternative to using external training institutions and the relatively high charges by private training institutions after the closure of the former industrial training boards which had been subsidized through levies from industries (Kesper, 2000).

Lack of technical know-how, experience and skilled personnel contributes to the inability to provide quality workmanship. 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. Furthermore, in developing countries there is little estimating guidance for the small and inexperienced contractor as there are no commercially published estimating guides, like those in developed countries (ILO, 1987). In addition, many of the contractors are sometimes unable to meet contract bid or project deadlines. Most contractors negotiate, for example, variation claims. The same limitations make it difficult and sometimes impossible to resolve disputes with clients (Aniekwu & Okpala, 1988).

Nothing can be done in an enterprise without people since the proprietor cannot do it alone. Personnel problems facing SMCEs include hiring, training, and retention of skilled staff (Said & Hughey, 2001). Whereas small firms provide a favorable working environment arising from the informal relationships, flexibility and a lean bureaucracy, a study by Levy, (1996) revealed that SMCEs find it difficult to obtain skilled and competent workers both at technician and supervisory level. The problem may have something to do with the perception of potential and actual employees regarding employment satisfaction

2.2.2.2 Management Skills.

Lack of effective management during their early stages is a major cause of business failure for small and medium sized contractors. Owners tend to manage their businesses themselves as a measure of reducing operational costs (Croswell & McCutchen, 2001).

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 a

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).

During the early stages of some business start ups, owners are unable to separate their business and family or domestic situations. Business funds are put to personal use and thus used in settling domestic issues. This has a negative impact on profitability and sustainability. Some owner 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 (Rwelamila, 2002).

Myers (2004) citing Hillebrandt (2000) suggested that management expertise is one of the scarcest resources in the construction industry. Kayanula and Quartey (2000), and Ramokolo and Smallwood (2008) stated that lack of managerial know-how places significant constraints on SMCE development. Even though SMCEs tend to attract motivated managers, they can hardly compete with larger firms. The lack of support services or their relatively higher unit cost can hamper SMCE effort to improve their management because consulting firms are often not equipped with appropriate cost effective management solutions for SMCEs. Furthermore, absence of information and/or time to take advantage of existing services result in weak demand for them.

2.2.2.3 Access to Capital

The relative lack of success facing small contractors is noted to be as a result of inadequate finance and inability to get credit from suppliers; inability to employ competent workers; poor pricing, tendering, and contract documentation skills; poor mentoring; 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 the work done (Mphahlele, 2001; Ofori, 1991).

Efforts to promote SMCEs access to finance might have more impact on development and performance but access is limited and the cost of capital is high. While the Government has made some efforts to increase accessibility to finances, the targeted programmes have had limited success because the awareness and usage of existing

promotional programmes is very low. In addition to insufficient access, high interest rates also pose a constraint to enterprise performance (Thwala & Phaladi, 2009). Moreover, Gounden (2000) reports that there are core difficulties seen in terms of discrimination by financial institutions against micro-enterprises with little collateral, difficulties in accessing information and a lack of market exposure. The inadequacy of external finance at the critical performance and transformation stages of micro-enterprises deters the enterprises with performance potential from expanding (Nissanke, 2001).

Shawa (2008:1) noted that in order for construction works to be carried out, there is need for availability and/or access to required plant and equipment which most SMCEs cannot afford. Mothlanthe (1990) further argued that the SMCEs do not usually use larger plant such as concrete mixers and bomag rollers until they start undertaking large contracts. Most of them are capable of operating with basic tools, like wheel barrows. This tendency to utilize manual, rather than mechanical methods of building might be due to SMEs contractors' inability to access the required equipment. It also depends on whether its productivity would improve sufficiently to justify the expense (Chilipunde, 2010). Consultants might insist on the use of a certain construction method that might require the use of hired equipment. This as well might pose problems for the contractor, since the hire charges may be high (Mothlanthe, 1990).

2.2.2.4 Tendering Procedures.

Aniekwu and Okpala (1988) noted that effectiveness of any contractual system can only be suitably assessed by its productive efficiency, that is, the ability to accomplish projects within a given time, for a given financial incentive, in a given contractual relationship. In reference to most commonwealth countries which use contractual systems inherited from UK as part of the British colonial legacy, Aniekwu and Okpala (1988) contended that the contracts were not designed to directly cater for the developing countries and are consequently often inadequate in dealing with situations in these countries. The view is supported by Rwelamila and Mayer (1999) who noted that nine out of the twelve Southern Africa Economic Community [SADC] countries use the traditional procurement system for delivering projects. In this environment, projects have often performed poorly in terms of balancing project objectives. Most projects experience serious problems with quality of constructed work, which result in extensive delays to

planned schedules, cost overruns and a general increase in claims and litigation (Rwelamila & mayer, 1999).

According to Shakantu (2003), tendering can prove to be costly, especially in a small-scale building contractor's organization which finds difficulty in employing resources vital to sustaining its operations, for example:

- The cost of purchasing tender documents;
- Transport and phone bills to get quotations from the suppliers,
- time taken for the estimator to price the tender document;
- Tender guarantees or letter of intent payments; and
- Postage cost of tender documents for opening.

This situation worsens if the small contractor carries on tendering without winning a contract. As a result, the contractor may resort to offering bribes to corrupt consultants, developers or owners of building projects.

According to Chilipunde (2007) the cost of tendering is recognized as a large expense to SME contractors and represents a large proportion of operating overheads. Contractors believe this cost to be fixed and part of their business but SMCEs do not have enough resources to allocate funding for submitting a competitive tender in a selective/invited tendering process.

A Development Bank of Southern Africa (DBSA) Construction and Development Series number one (1) (1993:15) reported that financial support is difficult to come by for SMCEs. The summary below tells it all:

We have found that the involvement of SME contractors is in fact a process of involving entrepreneurs with no capital in a capitalist system. Invariably these contractors do not have the facilities to provide guarantees or sureties and it is pointless to make these aspects conditions of tendering as they only serve to exclude potential contractors from the process. In our opinion every opportunity should be afforded to anyone to tender. His only qualification needs to be his willingness to tender and his enthusiasm for the project.

In addition Shakantu and Kajimo-shakantu (2007) cited Govender and Watermeyer (2001) who argued that the requirement for a performance bond presents a significant financial hurdle for micro enterprises. Moreover, because of their greater

surety risk factor, SMCEs are forced to obtain their performance bonds at significantly higher rates than well established enterprises.

Khoza (2008) suggested that inconsistent procurement and delivery practices by clients and consultants also impede the development of contractors. These include: Poor designs; Flawed tendering procedures; Processing of interim and final payments; Cash flow and ultimately sustainability of contractors; Poor client procurement practices also include focus on lowest price, undermining project delivery and the performance of contractors; and the practice of promoting the lowest price is further encouraged by tough competition due to an oversupply of contractors.

2.3 Roles, Development and Growth of SMCEs

The Government of the kingdom of Swaziland, for example, identified the construction sector as a priority area for improving the social and economic development of the country (Ministry of Public Works and Roads, Swaziland, 2007). However, to maximize the impact of the construction sector as part of the National Development Strategy (NDS), it is necessary to develop a sound national policy framework for the industry to improve its overall effectiveness and efficiency. Fundamental to the National Construction policy and in line with the National Development Strategy (NDS), is the empowerment of local contractors within the industry to maximize their participation and subsequent impact on the local economy (Croswell & McCutchen, 2009)

Internationally, there is a general agreement that small enterprises contribute immensely to economic development (ILO, 2001). Croswell and McCutcheon (2001) argue that small contractors can be economically useful if projects are designed to suit their capacity.

The Department of Public Works (1999) of South Africa states that contractor development is needed for the following reasons: - The relatively low skills and resources required at this scale can easily lower the entry point for the historically disadvantaged people to begin to participate in the industry. - Large numbers of functional small and medium-scale contractors can help to decentralize the construction industry dominated by established foreign contractors, either regional or multi-national firms. - A large number of functional contractors can develop a platform for performance and the redistribution of wealth. Small contractors can be powerful instrument on job creation within the

construction industry depending on the government policies. Small contractors can perform small projects at different and remote geographical locations that might be unattractive to big firms -Low overheads enable small contractors to work at more competitive prices.

The development of contractors' skills and knowledge is necessary in order to: (a) build capacity to grow their businesses through technical and managerial skills; (b) compete locally among fellow SMEs (c) build a foundation for competing globally, once adequate capacity has been built over time.

A Contractor Development Model (CDM) refers to structured methodology comprising measures designed to help the managers of SMCEs to develop their technical and managerial skills and thus grow their business enterprises. These models should be located within the procurement programmes of government, in line with the government's procurement policy.

2.3.1 Integrated Emerging Contractor Development Model (IECDM)

The Integrated Emerging Contractor Development Model is based on the Emerging Contractor Development Model (ECDM) (Dlungwana and Rwelamila, 2004). The ECDM is a best-practice tool aimed at assisting implementing agents to facilitate the implementation of an emerging contractor development programme. The ECDM helps focus on the quality and effectiveness of development programmes by ensuring more effective and comprehensive development of contractors' capability and capacity. Central to the ECDM is the implementation of a business plan with clear contractor development outcomes. Emerging Contractors on the IECDM programme participate in a Construction Education Training Authority (CETA)/National Qualifications Framework (NQF) level 2 learner ship programmes which are combined with the services of a nationally accredited construction mentor. The IECDM embraces the concepts of the ECDM with the added elements of project management and Total Quality Management (TQM).

Project management as defined by Duncan (1996) is "the application of knowledge, skills, tools and techniques to project activities in order to meet or exceed stakeholder's needs and expectations". Modern project management generally encompasses the integration of nine functional areas. These include the four core or constraint functions of scope, quality, time and cost, and five integrative and interactive

functions of risk, human resources, contract/procurement, information/ communications management and integration management. Aggrawal and Sumer cited by Suganthi and Anand (2008) define TQM as a total organization working as a team to meet or exceed customer needs and expectations by using systematic approach to continuous improvement.

It has been widely accepted that the success of the past and current contractor development initiatives has been quite modest. However, significant lessons can be drawn from those initiatives. There are lessons that have shown the need to: Inform the policies and research agenda by promoting the participation of emerging contractors, advocate the interest of emerging contractors and ensure that policies and procedures in the construction industry create an environment conducive to the development and promotion of emerging contractors, inform policies on the peculiarities of the construction industry's problems and increase the participation of emerging contractors in mainstream construction activities.

2.4 Empirical Literature Review

A recent study conducted by Mvubu (2009) has identified the following as the major problems facing Small and Medium Size Contractors: Delays with interim and final payments, as well as onerous contract conditions faced by construction firms, can also impose huge constraints on the industry. Many construction firms have suffered financial ruin and bankruptcy because of delays in payment, which are common with government contracts. From the research conducted it can be concluded that the relative lack of success among the small and medium size contractors is a result of the following problems which must be addressed in order to facilitate the success of the small and medium size contractors: a lack of resources for either large or complex construction work; an inability to provide securities, raise insurance and obtain professional indemnity; the contracts were inevitably packaged in such a way as to exclude small and medium size contractors (Mvubu , 2009).

Dlungwana, Noyana and Oloo (2004) found that inadequacy in technical and managerial skills required in project implementation: lack of continuity in relation to type, scale and location of work; an inadequate approach and insufficient knowledge,

time and experience required for the whole process of finding work, once found, insufficient understanding of the contract documentation and the preparation and submission of tenders; Slow and non-payment by government after completing a government project are the major challenges facing contractors in many developing countries..

According to Wanjohi and Mugure (2012), on a study of Small and Medium Enterprises (SMEs) in Kenya, SMEs face unique challenges, which affect their performance and profitability and hence, diminish their ability to contribute effectively to sustainable development. The challenges are: lack of managerial training and experience, inadequate education and skills, lack of credit, national policy and regulatory environment, technological change, poor infrastructure and scanty markets information.

Jaafar and Abdul-Aziz (2005) surveyed 172 SMEs contractors in Malaysia and concluded from what is termed Resource-Based-View that contractor success lies in project and financial management capability, marketing and supply chain relationship; however, they state that educational background and owner-manager characteristics are not necessarily success factors because competent skill can be employed to run the firm.

Miller (1962) from a 35 year construction experience examines the views of contractors who emphasized that, enterprises' survival in this competitive industry depends on the understanding of requirements, progressive in estimating, scheduling, purchasing, organizing, controlling project activities, knowing what has been done and how, and being flexible enough to adjust to changing situations. These are all important success factors. In Kenya, majority of those who run SMEs are ordinary lot whose educational background is lacking. Hence the owners may not be well equipped to carry out managerial routines for their enterprises (King & McGrath, 2002).

Thwala and Phaladi (2009) citing Holroyd (2003) asserts that success depends on competent skills, adequate resources, proper timing of activity planning and performance, teamwork, effective communication, fair dealing with people, honesty and integrity are essential.

2.5 Summary of Literature Review

Relative lack of success facing emerging contractors was discussed by (Crowell and McCutchen, 2001; Mphahlele, 2001 and Ofori, 1991 Rwelamila, 2002); International Labour Organization -ILO- (1987); as follows: 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.

From previous studies it has been established that a number of factors will influence the performance of Construction related SMEs. (Young & Hall, 1991; Abidali & Harris, 1995) suggest that contractor's project and financial management ability is a critical success factor in the performance of SMEs. (Kotler, 2000; Cromie, 1991) state that the ability of a contractor to market the enterprise among the industry role players is a critical success factor in the performance of SMEs. (Yusoff, 1995) state that experience and management expertise of the owner is critical success factor in the performance of SMEs. (Barkham, 1994; Jaafar and Abdul-Aziz, 2004 and Rotter, 1996) state that entrepreneurial characteristics in forms of creativity and need for achievement are critical success factor in the performance of SMEs (Yisa et al, 1995).

2.6 Study gap to be filled

Several studies addressing different aspects of Small And Medium Construction Enterprises have been undertaken; however little evidence from literature exists on any study on the performance of small and medium construction firms in Kenya and specifically none has been undertaken in Embu county.

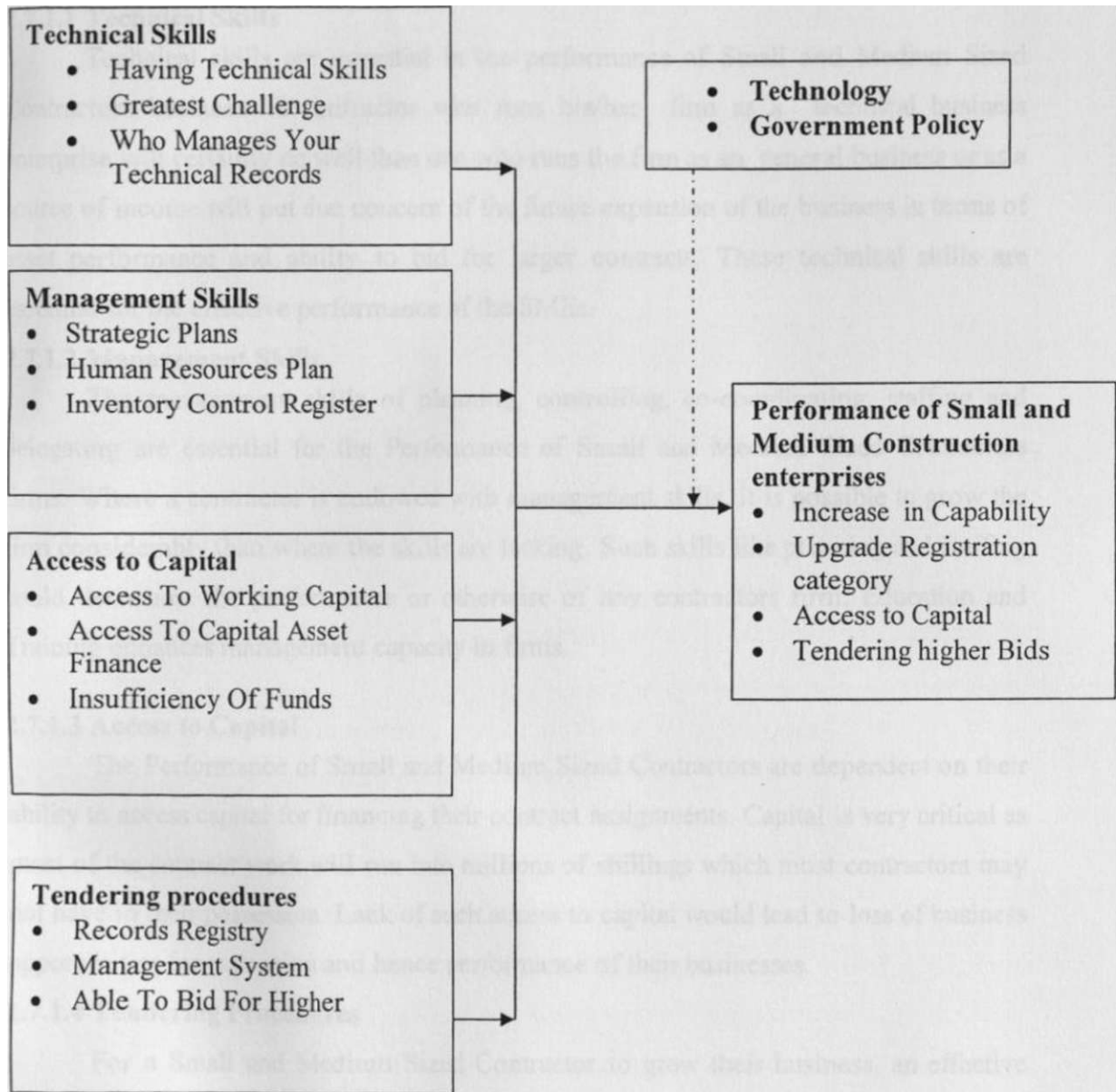
According to records held by Ministry' of Public Works (MOPW) Embu County Offices, no Local citizen owned firm is currently registered class A or B in the grading system. Therefore citizens have been participating in the industry for over 20 years, yet they are still struggling, surviving largely through special dispensation schemes! The domination of the industry by firms from other counties may not be a good thing in the

long run for Embu County. There is therefore the need to investigate the factors influencing performance of small and medium construction enterprises in Embu County.

2.7 Conceptual Framework

The relationship between independent variables: - Technical Skills, Management Skills, Access to Credit; Tendering Procedures and the dependent variable are illustrated in figure. 1, conceptual framework.

Intervening Variables



Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

2.7.1 Relationship between Variables

2.7.1.1 Technical Skills

Technical skills are essential in the performance of Small and Medium Sized Contractors business. A contractor who runs his/her firm as a technical business enterprise will certainly do well than one who runs the firm as an general business or as a source of income will put due concern of the future expansion of the business in terms of asset performance and ability to bid for larger contracts. These technical skills are essential for the effective performance of the SMEs.

2.7.1.2 Management Skills

The management skills of planning, controlling, co-coordinating, staffing and delegating are essential for the Performance of Small and Medium Sized Contractors firms. Where a contractor is endowed with management skills, it is possible to grow the firm considerably than where the skills are lacking. Such skills like planning and staffing could determine the performance or otherwise of any contractors firm. Education and Training enhances management capacity in firms.

2.7.1.3 Access to Capital

The Performance of Small and Medium Sized Contractors are dependent on their ability to access capital for financing their contract assignments. Capital is very critical as most of the contract work will run into millions of shillings which most contractors may not have in their possession. Lack of such access to capital would lead to loss of business opportunities for expansion and hence performance of their businesses.

2.7.1.4 Tendering Procedures

For a Small and Medium Sized Contractor to grow their business, an effective tendering system will need an effective record system of all their correspondences and legal and professional requirements. This goes beyond the level required of ordinary business enterprises as contractor log books are professional documents that are used to inspect ethical practices and to communicate technical details of past contract works undertaken when attending tendering interviews. Where a contractor cannot show proper record on all previous assignments undertaken and clearance certificates then performance would be highly unlikely as there would be no basis to evaluate ability to manage a higher tender price.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a discussion of the research methodology that was used in this study. It discusses the research design especially with respect to the choice of the design. It also discusses the population of study, sample and sampling techniques, data collection methods as well as data analysis and data presentation methods to be employed in the study.

3.2 Research Design

This study adopted a quantitative approach and in particular a descriptive survey research design. The design is appropriate because the study aimed at collecting information from respondents on their attitudes and opinions on the factors influencing performance of Small and Medium Construction Enterprises in Embu County. Descriptive survey is a method of collecting information by interviewing or administering a questionnaire to a sample of individuals (Orodho, 2003). It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho & Kombo, 2002).

3.3 Target Population

The study targeted all Small and Medium Construction Enterprises registered with ministry of Public Work with a physical address within Embu County. Small contractors are those registered in classes F, G and H while medium size contractors are those in classes C, D and E. The target population was made up of 120 Construction Enterprises as presented in Table 3.1 which also illustrates the basis of stratified random sampling.

3.4 Sampling and Sampling Procedures

The sample frame is a complete listing of all the sampling units or elements that can adequately represent that population (Franfort-Nachmias & Nachmias, 1996). However there is no such a complete formal list that can adequately satisfy a researcher as a sample frame (McDaniel Jr. & Gates, 1996). In such instances, it is suggested that

the researcher develops a sample frame that produces a representative sample of the population elements with the desired characteristics or attributes.

Table 3.1: Sampling Frame

Enterprise size	Population	Percentage
Small (class F,G,H)	98	82
Medium(Class C,D E)	22	18
Totals	120	100

Source: County Public works Office-Embu County, (2012)

3.4.1 Sample Size

According to Mugenda and Mugenda (2003), sampling process is a process of selecting elements from a population in such a manner that each the element in the sampling frame has an equal chance of been selected. Sample size for this study was obtained using the Krejcie and Morgan (1970) table of determining sample size from a given population as shown in Appendix 111.

With a confidence level of 95%, margin of error of 5% and a target population of one hundred and twenty (120) SMCEs, the table gave a sample size of ninety two (92) owner managers of SMCEs

3.4.2 Sampling Techniques

Stratified random sampling technique was used to select ninety two (92) owner managers of SMCEs. In this case each enterprise size; small or medium formed a strata and the sample size of ninety two (92) owner managers were apportioned accordingly as shown in table 3.2.To select the actual members making up the sample strata, two lists of names of enterprises-small and medium were produced and simple random sampling was used to obtain the desired number of members for each sample strata.

Table 3.2: Sampling Table.

Enterprise size	Population	Sample	Percentage
Small (class F,G,H)	98	75	82
Medium(Class C,D E)	22	17	18
Totals	120	92	100

3.5 Data Collection Instruments

Primary data was collected from the owner managers using questionnaires with both structured and unstructured questions. The questionnaires are advantageous whenever the population size is large enough to make it uneconomical for reasons of time or funds to observe or interview every subject. The questionnaire designed contains both open and closed questions. The open questions give the respondent freedom to decide the aspect, detail and length of his answer. It enables the respondent to give a more adequate presentation of his particular case and convey flexibility in his choice. The closed questions on the other hand are designed to keep the questionnaire to a reasonable length and this encourages response and validity in terms of the representativeness of the returns. Section A of the questionnaire will capture personal details on the respondents-owner managers while Section B of the questionnaire captured responses that answer the research questions and will contain Likert scale types of questions where the respondents were be required to indicate their level of agreement with statements that express a favorable or unfavorable attitude towards a concept being measured. This scale has polar anchors measuring from positive to negative response to a statement. A five ordered response levels scale were used which are; - 5= strongly agree, 4= agree, 3=not sure 2=disagree and 1 ^strongly disagree.

3.5.1 Piloting of Instrument

According to Njuguna (2011), citing Mugenda and Mugenda (2003), the research instrument should be pre-tested using between 1% and 10% of the sample size. The research instrument was pre-tested in a pilot study of ten (10) respondents each from class H- C from none sampled population of construction firms from other counties working in Embu County after which corrections and adjustments were be done.

3.5.2 Validity of the Instrument

Validity is the degree to which the data collected by an instrument can be said to be valid for purposes of analysis and making inferences from the data (Mugenda & Mugenda, 2003). In order to ensure content validity, the questionnaires were composed of carefully constructed questions to avoid ambiguity and in order to facilitate answers to all the research questions. The study supervisor was involved in giving input and

approval of the research questionnaire. This ensured that the content addressed the intended purpose and avoided ambiguity. The instrument was also presented to a senior Quantity Surveyor at the MOPW, an expert on SMEs in the construction industry to ascertain the instrument's face validity before the instrument was administered to the owner-managers at random.

3.5.3 Reliability of the Research Instrument

Reliability of a research instrument is the extent to which the results obtained from the instrument are consistent and are an accurate representation of the population under study (Kabue, (2011) citing Joppe, (2002). To ensure reliability of the research instrument of this study, internal consistency of the data was determined. A score obtained in one item from the pilot study instrument was correlated with scores obtained from other items in the instrument. Cronbach's Coefficient Alpha was computed using the Kuder-Richardson formula. The benchmark set for reliability in this study as recommended by Kay (1999) was a reliability correlation coefficient of 0.6 to 0.9. Since the correlation coefficient of the administration was 0.72 which was within the recommended range, the instrument was considered reliable and therefore used to collect data for the study.

3.6 Data Collection Procedures

Data collection procedure followed a systematic process of development of the research proposal, identification of the study area, target population, sampling frame, and sample size. Consultation with the study supervisor was done during this process. This followed the presentation of the research proposal for approval and permission to collect data. The study then obtained the telephone contact and physical address of respondents at their respective institutions. The questionnaire was self administered. Delivery of the instrument, reminder and personal collection whenever possible was done by the researcher and two assistants. The respondents were requested to complete the questionnaires in two weeks, and when through, the researcher made effort to get the questionnaires back.

3.7 Data Analysis Techniques

The data collected was grouped and subjected to nominal, ordinal, ratio and interval scales of measurements. The data was then coded to allow for analysis using

Computer software, Statistical Package for Social Sciences (SPSS) (Version 17) computerized software. Analysis of the open-ended questions data made use of qualitative methods of data analysis. This involved derivation of explanations and making use of interpretations of the findings basing on descriptions of open-ended questions. The concern is on description of patterns and uniqueness in the data collected. Quantitative analysis on the other hand involved the derivation of statistical descriptions and interpretation of data that relied purely on numerical values. It also involved making conclusions from numerical values through the process of quantification that can allow reliability, comparability and validity of the findings. The findings were presented in tables and percentages and frequencies used to present descriptive analysis findings.

3.8 Ethical Considerations

Ethical issues in this research were addressed as follows; through the use of the introductory letter (Appendix 1) which accompanied the questionnaire the following ethical issues were addressed;

- Consent and voluntary participation of the respondents was sought and presumed obtained by the fact that they willingly responded.
- Right to know the purpose of the study and how the process was conducted was communicated in both the letter and the questionnaire.
- The right to confidentiality and anonymity was assured by not soliciting the human and enterprises identity. In addition, the data and information arising thereof was treated and reported on in such a way that it would not be traced to any person or enterprise.

Throughout this research project report, the work of others has been acknowledged through use of citation and references. The principle of objectivity was adhered to throughout the research process including the design, data collection, analysis and interpretation of data. In particular, analysis and interpretation of data was conducted in an objective way in order that the results do not affect the participants or mislead those who will read the project report. In view of the above it was felt that most of the ethical issues were addressed.

Table 3.3: Operational definition of Variables

Objectives	Variable	Indicators	Measurement Scale	Type of Analysis
Influence of Technical Skills on the performance of SMCEs	Technical Skills	<ul style="list-style-type: none"> • Having technical skills • Greatest challenge • Who manages your technical records • Technical skills contribution 	Nominal and ordinal scales	Descriptive statistics
Influence of Management Skills on the performance on SMCEs	Management Skills	<ul style="list-style-type: none"> • Strategic plans • Plan human resources • Inventory Control register 	Nominal and ordinal scales	Descriptive statistics
Influence of Access to Capital on the performance on SMCEs	Access to Capital	<ul style="list-style-type: none"> • Access to working • Access to capital asset finance • Not Bid for contract due to insufficient funds • Business capital constraining Construction business performance 	Nominal and ordinal scales	Descriptive statistics
Tendering Procedure on the performance on SMCEs	Tendering procedures	<ul style="list-style-type: none"> • Records registry • Management system • When tendering • Able to bid for higher 	Nominal and ordinal scales	Descriptive statistics
Dependent Variable	Performance of Small and Medium Construction enterprises	<ul style="list-style-type: none"> • Growth in Capability • Upgrade Registration category • Technical Skills • Management Skills • Access to Capital • Tendering procedures 	ordinal and interval scales	Descriptive statistics

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter presents the analysis of data collected from the fielded items in the study questionnaire. The findings were analyzed and presented in the form of frequency tables, numerical values and percentages generated through Statistical Package for Social Science (SPSS) (Version 17) computer software. The responses are presented followed by a brief interpretation guided by the research objectives and a discussion on research findings from the analysis of the data.

4.1 Response rate of the study

The questionnaires were distributed to 92 randomly selected respondents of which 68 were completed and returned, giving a response rate of 74%. The collection procedures involved personal administration, reminder and personal collection whenever possible. Compared to other results in the building industry by Chiocha (2009)-47.14%, Buys (2004)-32.2 % and Crafford (2002)-19.3% the overall response rate of 74% was found to be adequate for analysis and for discussions of the study findings. As for the 24(26%) unreturned questionnaires, this can be attributed to the inability by the respondents to complete and return them by 4th July 2012.

Table 4.1: Response rate of the study

	Frequency	Percentage
Responded	68	74
Non Response	24	26
Total	92	100

4.2 Background of the respondents

4.2.1 Gender profile of the respondents

The respondents were asked to indicate the gender profile in terms being male or female. This expresses the nature of gender relations in the construction industry. Table 4.2 illustrates gender profile of the sample.

Table 4.2: Gender of respondents

Gender	Frequency	Percentage
Male	64	94
Female	4	6
Total	68	100

The study found that 64 (94%) respondents were male and 4 (6%) female. This agrees with the findings of Chilipunde (2007), who viewed this as a true reflection of the construction industry set up which is predominantly male. Moss (2007) reaffirms the observation and also states that this is a reflection of the distribution of the available gender sampling aspect in an environment that has been historically dominated by men.

4.2.2 Highest education qualification

The respondents were asked to indicate the highest level of academic qualification achieved. Table 4.3 illustrates the level of qualification across the sample.

Table 4.3: Highest education level

Education level	Frequency	Percentage
Diploma	36	53
Degree	0	0
Masters	0	0
PhD	0	0
Other	32	47
Total	68	100

Slightly over half 36(53%) of the respondents had a national diploma while 32 (47%) respondents had other qualifications below the diploma. Hall (1995) suggested that, the level of education is an important aspect in terms of small firm performance.

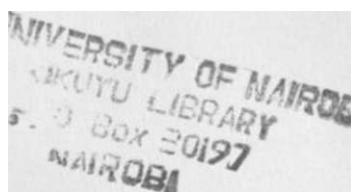
4.2.3 Category of registration

The respondents were asked to indicate the current registration class. Class "H" is the lowest category and the highest class is "A". The registration category of the respondents indicates the growth path and the level of experience of the firm. The analysis is presented in Table 4.4.

Table 4.4: Category of registration

Category	Frequency	Percentage
G	32	47
F	21	31
E	11	16
D	4	6
Total	68	100

Table 4.4 shows that 32 and 21 (47% + 31% = 78%) of the respondents are small scale enterprises registered in class G and F while 15(16% + 6% = 22%) are in medium class of D and E. The findings agree with Jaafar and Abdul-Aziz (2005) who observed that the small scale sector comprises the largest percentage of total number of contractors.



4.2.4 Age of respondents

The respondents were asked to state their age brackets as shown in Table 4.5.

Table 4.5: Age of respondents

Ages	Frequency	Percentage
20 - 29 yrs	0	0
30yrs -39yr	6	9
40yrs-49yrs	34	50
50yrs-59yrs	22	32
60yrs and above	6	9
Total	68	100

Majority of the respondents 34(50%) fall within 40 to 49 years of age. This is followed by 22 (32%) in the age group of 50 to 59 years There are 6(9 %) respondents in the age of 60 years and above. The youngest individual was 33 years old in the bracket of 30 to 39 years of age. This bracket had only 6 (9%) respondents. These findings agree with Hall (1995) who noted that the optimum age for American entrepreneur is between 45 to 55 years. Hughes (2003) stated that the age of the respondents is usually related to the experience profile.

4.2.5 Cross tabulation of category of registration and highest education level.

Cross tabulations are used to summarize data in such a way that reveals the relationship between two variables; in this case of category of registration and highest education level. One of the requirements for registration of construction enterprises with the MOPW (Kenya) is the possession of a technical qualification of at least the owner-manager or a one director of the firm. The analysis of this cross tabulation is shown on Table 4.6.

Table 4.6: Cross tabulation of category of registration and highest education level

		Highest education level					
		Diploma		Other		Total	
		No	%	No	%	No	%
Category of registration	G	11	16.	4	6	15	22
	F	15	22	8	12	23	34
	E	7	11	17	25	24	35
	D	3	4	3	4	6	9
Total		36	53	32	47	68	100

The Study found that $11 + 15 = 26$ ($16\% + 22\% = 38\%$) respondents in class G and H had a diploma level of literacy while $4 + 8 = 12$ ($6\% + 12\% = 18\%$) respondents in this category had other qualifications. For respondents in Class D and E in the medium scale category, $7 + 3 = 10$ ($11\% + 4\% = 15\%$) had a diploma level of literacy while $17+3=20$ ($25\% + 4\% = 29\%$) in this category had other qualifications. The result shows that the small scale category of the study sample had higher education qualification than the higher category of medium scale construction enterprises at 38% and 15% respectively. These findings are contrary to Hall (1995) who suggested that, the level of education is an important aspect in terms of small firm performance. However the findings agree with Jaafar and Aziz, (2005) who state that educational background and owner-manager characteristics are not necessarily success factors of SMCEs because competent skill can be employed to run the firm.

4.3 Presentation of analysis according to research questions

The research data from the questionnaire was used to investigate how the respondents rated the influence of technical skills, management skills, access to capital and tendering procedures on the performance of Small and medium construction enterprises.

4.3.1 Influence of technical skills on performance of small and medium construction Enterprises

It is important to have an in-depth knowledge of a business that one undertakes. With technical skills in the business, it is easy to run the construction business rather than working on trial and error. The respondents were asked to state whether they have technical skills in managing the construction business. Table 4.7 shows the responses to the questionnaire item.

Table 4.7: Possession of technical skill

Possession	Frequency	Percentage
Yes	64	94
NO	4	6
Total	68	100

An overwhelming majority 64 (94%) respondents regarded themselves as having a technical skill. This agrees with MOPW (2004) requirement that at least one of the directors or partners of the firm requesting for grading with the Ministry must have minimum technical qualification relevant to construction. The need for respondents to have technical skills is supported by the observation of Dangalazana and Newadi (2005) who say that owner-managers are an investment in terms of their skills and that a potential for growth and therefore performance exists.

4.3.2 Management of technical records

The study sought to establish who manages the enterprise's technical records. Table 4.8 illustrates the responses by the study sample.

Table 4.8: Management of technical records

Person managing	Frequency	Percentage
Self	46	68
An Employee accountant	18	26
An external accountant	4	6
No specific person	0	0
Total	68	100

This Study found that 46(68%) respondents manage their technical records. The other 18(26%) respondents made use employee accountants to manage their technical records, while 4(6%) respondents use external accountants. According to Mbogo (2011), citing Greenbank (1999), owner-manager who works at both management and operational level acquire information about the business through personal experience rather than relying on feedback from other sources.

4.3.3 Contribution of technical skills to performance of SMCEs

This study asked the respondents to rate the extent to which technical skills contribute to the performance of SMCEs. The skills rated in this study were; Financial forecasting management skills, Profitability ratio interpretation skills, Cash flow management skills and Working capital management skills. The ratings scale was; Very Great = 5; Great = 4; Not sure = 3; Rarely = 2; Not at all = 1. The ratings are analyzed as shown on Table 4.9.

Table 4.9: Contribution of technical skills to performance of SMCEs

Skill	N	Mean	Std. Deviation
Financial forecasting management	68	2.00	1.206
Profitability ratio interpretation	68	1.62	0.888
Cash flow management	68	1.85	1.396
Working capital management	68	1.76	1.046

The study indicates that the rating for contribution of financial forecasting management skills to performance of SMCEs was ranked highest with a mean of 2.00 and a standard deviation of 1.206, Cash flow management was ranked second with a mean of 1.85 and a standard deviation of 1.396. The skill of Working Capital management was rated third with a mean of 1.76 and a standard deviation of 1.046 while profitability ratio interpretation skill was ranked lowest with a mean of 1.62 and a standard deviation of 0.888.

4.4 Influcnce of management skills on performance of small and medium construction enterprises

4.4.1 Use of strategic plans

The respondents were asked to indicate whether they use any strategic plan in managing the firm's performance and the results are as shown in Table 4.10.

Table 4.10: Use of strategic plans in managing performance

	Frequency	Percentage
Yes	34	50
No	34	50
Total	68	100

From table 4.10, 34(50%) respondents indicated that they use strategic plans in managing their performance. A number of respondents, 34(50%) said that they do not use any strategic plan. Management planning is a crucial factor in guaranteeing correct development course of a business as well as generating profits. According to Kahn (1999), there is a positive relationship between performance of a business and strategic planning. Anderson, Cobbold and Lawrie (2001) suggested that the root cause for failure and poor performance of SMCEs is lack of management attention on the part of the owner-manager to strategic issues. Mall (1995) asserts that, in the construction industry, the level of planning in small firms is low.

4.4.2 Human resources planning

The study sought to know the extent to which the respondents plan the human resource in the enterprise. The results are shown on Table 4.11.

Table 4.11: Extent of planning human resources

Ratings	Frequency	Percentage
Very Great	24	35
Great	44	65
Not much	0	0
Not at all	0	0
Total	68	100

The Study found that 24 (35%) respondents indicate they take their human resource planning seriously. The other 44(65%) respondents also plan their human resource. This is contrary to findings by Dangalazana and Newadi (2005) that owner-managers of SMCEs are weak in human resource planning.

4.4.3 Capital asset inventory control registers.

The study sought to know whether the enterprises maintain a Capital Control Register (CCR).CCR will reflect growth in the firm's capital assets and thus the enterprise's capacity. The results are shown on Table 4.12 below.

Table 4.12: Existence of capital assets inventory control registers

	Frequency	Percentage
Yes	36	53
No	26	38
No response	6	9
Total	68	100

Over half of the respondents, 36(53%) in this study indicated they maintain a capital asset inventory control register as is in Table 4.12. 26(38%) had no evidence of a capital inventory control register while 6(9%) of the owner-managers did not respond

4.4.4 Delegation of duties

The respondents were asked to rate the extent to which they exercise the management function of delegating duties. The efficient management of the business is critical to its survival and as the firm grows, it is necessary to delegate responsibilities to others in the firm in order for the owner-manager to focus on strategic issues facing the firm. The ratings were: Always =5; Occasionally = 4; Not sure = 3; Rarely = 2; Not at all= 1. This analysis is shown on Table 4.13.

Table 4.13: Ratings for extent of delegation of duties

Duties	N	Mean	Std. Deviation
Finance	68	1.97	0.969
Human resources	68	2.12	1.365
Capital assets management	68	2.03	1.193
Procurement of materials	68	2.03	0.937

The study shows that the respondents rated human resources duty as the most delegated function with a mean of 2.12 and a standard deviation of 1.365 followed by both capital asset management and procurement of materials duties with a mean of 2.03 and a standard deviation of 1.193 and 0.937 respectively. Financial function was rated the lowest with a mean of 1.97 and a standard deviation of 0.969. Mbogo (2011) argues that SME owner-manager making all the financial decisions has an implication for the firms function and may lead to low staff morale and customer service which may in turn contribute to the failure or success of the SME.

4.4.5 Contribution of management skills

The study asked the respondents to indicate to what extent management skills contributed to their business performance. The analysis of the findings is shown on Table 4.14.

Table 4.14: Contribution of management skills to business performance

	Frequency	Percentage
Very Great	56	82
Great	12	18
Not much	0	0
Not at all	0	0
Total	68	100

Majority of the respondents 56(82%) indicated that management skills contribute greatly to their construction business performance while 12(18%) agree that management skills contribute to their business performance. These findings agree with Kayanula and Quartey (2000), and Ramokolo and Smallwood (2008) who argued that lack of managerial know-how place significant constraints on SMCEs' development and growth.

4.5 Influence of access to capital on performance of small and medium construction enterprises

SMCEs are constrained by capital which include inadequate financial capability, high cost of capital, and poor access to construction equipment for lease, hire or owned.

4.5.1 Challenge in accessing working capital

The study sought to find the extent to which respondents find access to working capital as a challenge. The result of the study is shown on Table 4.15.

Table 4.15: Extent of challenge in accessing working capital

	Frequency	Percentage
Very Much	42	62
Much	20	29
Not Much	6	9
Not at all	0	0
Total	68	100

From Table 4.15 42(62%) respondents indicated they are seriously challenged when accessing working capital. The other 20(29%) respondents also face challenges when accessing working capital. Only 6(9%) respondents indicated that access to working capital is not a challenge. The findings of this study agree with Kayanula and Quartey (2000) who found that capital is a major problem facing SMCEs. Carson (2006) also argued that the difficulties SMCEs have in attracting finance; strongly affect the performance of their work.

4.5.2 Challenges to accessing capital assets finance

The study sought to find the extent to which respondents find accessing capital assets finance a challenge. This analysis is shown on Table 4.16.

Table 4.16: Extent of challenges in accessing capital asset finance

	Frequency	Percentage
Very Much	46	68
Much	22	32
Not much	0	0
Not at all	0	0
Total	68	100

Table 4.16 shows that 46(68%) respondents are seriously challenged by access to capital assets finance. A further 22(32%) respondents find access to capital assets finance a challenge. The findings of this study agree with Kayanula and Quartey (2000) citing difficulties SMCEs' face in accessing appropriate capital assets and information on available techniques. Aryeetey and Nissanke (1994) mentioned old equipments as one of the most significant constraints to performance of SMCEs.

4.5.3 Missed bidding due to insufficient funds

Tendering can prove to be costly, especially in a small-scale building contractor's organization which finds difficulty in employing resources vital to sustaining its operations. The respondents were asked to state whether there is a time the firm was unable to bid due to insufficient funds. The analysis of the results is shown on Table 4.17.

Table 4.17: Missed biddings due to insufficient funds

Response	Frequency	Percentage
Yes	40	59
No	28	41
Total	68	100

The study shows that 40 (59%) respondents indicated they were at times unable to bid due to insufficient funds. The other 28(41%) respondents have had no challenge of insufficient funds when bidding for new contracts. The results of this study agree with the observation by Chilipunde (2010), that some contractors are challenged by tendering requirements in the standard contract documents that call for high levels of bid bonds and performance bonds which leave the contractors gasping for financial breathe, especially when bid for several projects, each of them with the same independent requirements.

4.5.4 Access to business capital

The respondents were asked to state how much they find access to business capital constraining their construction business performance. Table 4.18 present the findings.

Table 4.18: Constrain by access to business capital

	Frcquency	Percentage
Very Much	28	41
Much	30	44
Not Much	10	15
Not at all	0	0
Total	68	100

From the sample respondents, 28(41%) indicated that their performance is seriously constrained by access to business capital. The other 30(44%) respondents also indicated that access to business capital constrain their performance. 10(15%) respondents indicated that they are not seriously constrained by access to business capital.

4.6 Influcnce of tendering procedures on performance of small and medium construction enterprises

Procedures and conditions of tendering at times only serve to exclude potential contractors from the process. Every opportunity should be afforded to anyone to tender and the only qualification needs to be the businesses willingness to tender and the enthusiasm for the project (DBSA, 1993)

4.6.1 Records registry

The respondents to this study were asked to indicate whether they have a records registry for the business. The results are shown on Table 4.19.

Table 4.19: Existence of a records registry

Response	Frequency	Percentage
Yes	36	53
No	28	41
No response	4	6
Total	68	100

The findings of the study were that 36(53%) respondents said they maintain a records registry for their organization. The other 28(41%) respondents indicated that a record registry did not exist in the organization. 4(6%) owner-managers did not respond to the question. According to Wijewardena and Tibbi (1999), 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 a lack of basic business management skills.

4.6.2 Effectiveness of the records management system when tendering

Owner-managers were asked to state how effective the firm's record management system is when tendering for new jobs. The responses are shown on Table 4.20.

Table 4.20: Effectiveness of the firm's management system

Effectiveness	Frequency	Percentage
Very Effective	46	68
Effective	22	32
Not much	0	0
Not at all	0	0
Total	68	100

This study found that 46(68%) respondents consider the organization's records management system as very effective when tendering for new jobs. 22(32%) respondents said that the management system is effective when tendering for new jobs.

4.6.3 Ability to bid for higher value contracts

The respondents were asked to state whether they were able to bid for higher value contracts in the last one year. Ability to bid for higher value contract is an indicator that a business is growing and this can be related to the enterprise's performance. The responses are shown on Table 4.21

Table 4.21: Ability to bid for higher bids in the last one year

Ability	Frequency	Percentage
Yes	36	53
No	26	38
No response	6	9
Total	68	100

This study found that 36(53%) respondents were able to bid for higher value jobs while 26(38. %) respondents did not bid for higher value contracts in the last one year. The study did not establish why 6(9%) sample members failed to give a response to this item. According to Dlungwana and Rwelamila (2003), capability is one of the variables that distinguished one contractor from the other.

4.6.4 Challenges faced by SMCEs when tendering for new contracts

Owner-managers were asked to rate the extent to which they encounter challenges in finance, technical capacity, legal requirements and political influence when tendering for new contracts. The ratings were: Very Great =5; Great = 4; Not sure = 3; Rarely = 2; Not at all = 1. The analysis of the ratings is shown on Table 4.22.

Table 4.22: Challenges faced by SMCEs when tendering for new contracts

Variable of measure	Std.		
	N	Mean	Deviation
Technical capacity	68	2.82	1.507
Legal requirements	68	1.71	1.142
Financial	68	3.26	1.582
Political influence	68	1.32	0.475

From the study the respondents ranked financial challenge as the highest with a mean rate of 3.26 and a standard deviation of 1.582, technical capacity as a challenge was ranked second with a mean rate of 2.82 and a standard deviation of 1.507. Legal requirements was ranked third with a mean of 1.71 and a standard deviation of 1.142 and political influence as a challenge was ranked lowest with a mean of 1.32 and a standard deviation of 0.475. The findings of this study agree with Sibanda (1998) who observed that SMCEs are challenged by tendering requirements in the contract documents and may require training and relaxation of requirements such as sureties and bonds in view of the relatively small value of their work.

4.6.5 Tendering and business performance

The respondents were asked to rate the extent to which tendering facilitated their business performance. The analysis of the results is shown on Table 4.23.

Table 4.23: Extent to which tendering facilitated business performance

Extent	Frequency	Percentage
Very Great	12	18
Great	16	23
Not sure	6	9
Not much	28	41
Not at all	6	9
Total	68	100

From table 4.23, 12(18%) respondents believe that tendering facilitated business performance to a great extent. There are 16 (23%) respondents who believed that tendering facilitated business performance while 28(41%) of the respondents indicated that tendering did not facilitate performance very much. The remaining 6(9%) indicated that tendering did no facilitate performance at all. These findings agree with Shakantu and kajimo-shakantu (2007) who noted that even with promotion of SMCEs through programmes such as preferential/affirmative procurement policies, the efforts have had some limited success.

4.7 Growth of small and medium construction enterprises

Construction enterprises are classified using the maximum value of a project that an enterprise can execute. The classification is made by assessing their financial resources, ability to access capital, assets like plant and equipment; human resources particularly in terms of expertise and skills; and experience relating to past projects executed and associated performance arising thereof. (MOPW, Kenya, 2011).

4.7.1 Growth of Business in performance capability

The respondents were asked to indicate whether in own view, the business grew in capability in the last five years. The results are shown on Table 4.24.

Table 4.24: Growth of business in performance capability

Growth	Frequency	Percentage
Yes	24	35
No	44	65
Total	68	100

From this study, 24(35%) respondents believed their organization grew in capability in the last five years, while 44 (65%) respondents said their businesses did not grow in capability during that period. Ssegawa (2008) noted that grading of construction enterprises is made by assessing their financial resources, that is, in terms of bank balance, or their ability to access credit and short term investments; assets or guarantees to accessing assets like plant and equipment; human resources particularly in terms of expertise and skills; and experience relating to past projects executed and associated performance arising thereof.

4.7.2 Growth of business in registration status

The respondents were asked whether the business upgraded to a higher class in the last five years. This analysis is shown on Table 4.25.

Table 4.25: Growth of business in registration status

Growth	Frequency	Percentage
Yes	36	53
No	32	47
Total	68	100

The study shows 36 (53%) respondents indicated that they upgraded from one category of registration to the next category while 32(47 %) respondents did not upgraded their status in the last 5 years. An enterprise may register for any class size and thereafter request to be re-classified for a higher class after trading for at least two (2) years and illustrating a track record of competence including the possession of adequate resources (MOPW, 2004)

4.8 Influence of the study variables on the performance of SMCEs

The respondents in this study were asked to rate the influence of the following on the performance of their construction business: - Technical skills, Management skills, Access to credit and Tendering procedures. The ratings are tabulated as shown on Table 4.26.

Primary data obtained through questionnaires was used. Data so collected was analyzed based on the following; Likert scale for analysis. The model used in calculation is: -

Likert Scale

$$X_w = \frac{\sum F_i X_i}{\sum F_i}$$

Where: -

X_w = Weighted Average

X_i = Weight of

F_i = Frequency

Table 4.26: Analysis of influences of study variables on performance of SMCEs

Weights Aspects	Very Great (5)	Great (4)	Not sure(3)	Rarely (2)	Not at all (1)	$\sum F_i$	$\sum F_i X_i$	\bar{X}_w
Technical Skills	32	18	0	12	6	68	262	3.85
Management Skills	11	23	0	0	34	68	181	2.66
Access to Capital	39	23	0	0	6	68	293	4.31
Tendering Procedures	33	29	0	0	6	68	289	4.22

The scores were rated from 5 (Very Great) to 1(Not at All). From table 4.26, the respondents ranked the influence of Access to capital on performance of the SMCE the highest with a mean rating of 4.31 on the Likert scale. Tendering procedures was ranked second with a mean rate of 4.22 on the Likert scale. The influence of technical skills was ranked third with a mean rate of 3.85 while the influence of management skills on performance of the SMCE was ranked lowest with a mean rate of 2.67 on the Likert scale which means that the respondents did not find management skill having a much influence the performance of the SMCE

4.9 Qualitative Analysis

From the responses to the open ended question on the greatest challenge faced by SMCEs in managing their firms, the following are the major challenges SMCEs face; access to capital was mentioned by 32(47%) respondents while for 19 (28%) respondents,

technical skills is the biggest challenge. A number of respondents 15 (22%) indicated they encountered difficulties in arranging for guarantees, especially obtaining acceptable bid and performance bond. Depending on bank loans/ paying high interest rates was mentioned by 10(15%) respondents and 6(9%) respondents said lack of commitment in implementing policies geared to assist small and medium size contractors by government officials.

Three (4%) respondents mentioned suppliers not willing to offer credit to small and medium size contractors. There was a mention of difficulties encountered in winning competitive jobs as one respondent said, "It is impossible to get such a job found on newspaper." And lastly there were 5(7%) respondents who indicated they find a challenge in government procedures in the process upgrading to the next category.

For question on the experience of the contractors in the attempt to grow professionally from class H to C, the 18 (26%) owner-managers responded that the government has set a very high threshold to qualify for the next level in their growth within the grades. 13(19%) respondents cited work load of inadequate size and a problem obtaining work which can help the firm improve on its profile.

Lack of a proper contractor upgrading policy was also mentioned as one respondent indicated, "I don't understand the process". There were 2(3%) respondents who mentioned unethical conducts including corruption in the process of upgrading.

4.10 Summary of Data Analysis

From a response rate of 74%, the respondents had 90% responses that indicate access to capital was a challenge to their performance, while 94% respondents said they possessed technical skills. The study shows that 97% found access to capital asset a challenge to their enterprise performance while access to business capital was found to be a challenge. The respondents rated the influence of technical skills on performance of the SMCE at 3.85 on the Likert scale while the influence of management skills on performance of the SMCE was 2.66. The influence of Access to capital on performance of the SMCE was rated at 4.31 scale with the influence of tendering procedures on performance of the SMCE rated at 4.22 on the Likert scale.

CHAPTER FIVE
SUMMARY OF THE FINDINGS, DISCUSSION, CONCLUSIONS AND
RECOMMENDATIONS OF THE STUDY

5.1 Introduction

This chapter summarizes the study findings and draws conclusions from the data collected. In this chapter, recommendations to the Government and stakeholders in the construction industry will be made on how to improve the performance of the small and medium construction enterprises. Areas of further research will also be cited in this chapter.

5.2 Summary' of Findings

The study was conducted to investigate the factors influencing performance of small and medium building construction enterprises in Embu County, Kenya. The study used responses from owner-managers of small and medium construction enterprises. On analyzing the data, the study found there is a gender imbalance in the construction industry with the male gender dominating the industry. The study found that the highest education level attained by the respondents in the sample was the diploma certificate. Further, few youths are engaged as owners of construction enterprises. The response rate was 74% which was considered adequate for the study. The study investigated the influence of technical skills, management skills, and access to capital and tendering procedures on the performance of the SMCEs. The study found that the influence of management skills on performance of SMCEs was ranked lowest with a mean rating of 2.66 on the Likert scale while the access to capital, tendering procedures and technical skills influence on the performance of SMCEs were rated at 4.31, 4.22 and 3.85 in that order.

5.3 Discussion of the Findings

The study with a view to establish the Influence of technical skills on performance found that technical skills influenced performance of SMCEs. This agrees with Dlungwana et al, (2004) who found that inadequacy in technical and managerial skills required in project implementation by contractors have impeded their performance

and growth. This is supported by Thwala and Phaladi (2009) citing Holroyd, (2003) who asserts that success depends on competent skills, adequate resources, proper timing of activity planning and performance, teamwork, effective communication, fair dealing with people, honesty and integrity are essential.

The study sought to establish the influence of management skills on performance and found that the respondents ranked management skills lowest as an influence on performance of SMCEs. This lack of influence of management of skills on the performance of contractors is contrary to the observation made by Yusoff, (1995) who found that experience and management expertise of the owner is critical success factor in the growth of SMEs. And further to show the departure of opinion, Barkham, (1994); and Jaafar and Abdul-Aziz,(2004) state those entrepreneurial characteristics in forms of creativity and need for achievement are critical success factor in the growth of SMEs. Therefore SMCEs owner-managers may not directly relate their performance to structured management systems but by intuition and experience as summarized by Jaafar and Abdul-Aziz, (2005) who state that educational background and owner-manager characteristics are not necessarily success factors because competent skill can be employed to run the firm.

The study found access to capital to influence performance of SMCEs. This agrees with Thwala and Phaladi (2009) who found that, in addition to insufficient access, high interest rates also pose a constraint to enterprise performance. Moreover, (Gounden 2000) reports that there are core difficulties seen in terms of discrimination by financial institutions against small enterprises with little collateral, difficulties in accessing information and a lack of market exposure. Also in agreement is Naissanke, (2001) who found that inadequacy of external finance at the critical growth and transformation stages of micro-enterprises deters the enterprises with growth potential from expanding.

The study found tendering procedures to have an influence on the performance of SMCEs. This is supported by findings by Ngala, et al (2005) who found that Lack of effective documentation and bid management during their early stages is a major cause of business failure for small and medium sized contractors. Owners tend to manage their businesses themselves as a measure of reducing operational costs. To support the findings Jaafar and Abdul-Aziz, (2005) claims that most SMCEs, end up losing track of their daily

transactions and cannot account for their expenses and their profits at the end of the month nor show evidence of past success in contracting as required in the tendering procedures.

5.4 Conclusions of the Study

Benefits of a competitive local industry include sustainable employment creation, economic growth as a result of the tendency by local contractors to spend in the domestic economy, and equity in income distribution. Throughout the world, one finds the SMCE's are playing a critical role in absorbing labour, penetrating new markets and generally expanding economies in creative and innovative ways. This study considers that with an appropriate enabling environment, SMCE's should be seen as part of an integrated strategy to promote a diversified economy and where entrepreneurship flourishes.

The study has revealed that SME contractors face a variety of challenges. Access to capital remains a dominant challenge to SME contractors in this study. Other constraints that influence the performance of SMCEs include, technical skills and tendering procedures but Management skills was not directly linked to the performance of the SMCEs.

5.5 Recommendations of the Study

Small and Medium Construction Enterprises (SMCEs) form an important sector of any construction economy. The need for efficient SMCEs is well documented and cannot be over-emphasized as they are vital in their contribution to employment creation and value re-orientation. The process of performance of these enterprises therefore, needs to be well understood and addressed.

The study suggests the need by Small and Medium Construction Enterprises (SMCEs) to acquire modern technical skills to meet the dynamic nature of the construction industry and ensure sustainable construction business enterprise. This can be achieved through the Government and construction industry stakeholders embarking on strategic programmes to promote the development of skills, in particular management

skills, to enable entrepreneurs to run their companies profitably and in a sustainable manner. This means that registers of Contractors and the contractor development models should be carefully integrated into a streamlined effort designed to build contractors' capacity to grow and compete.

The study further suggests that the Government and Construction industry stakeholders such as Kenya Association of Building and Civil Engineering Contractors (KABCEC) should embark on programmes to promote the development needs of emerging contractors. Such interventions should include adequate preparations, needs assessments and understanding of the needs of the SMCES. Training approaches should be structured with mentorship and should include monitoring and evaluation to ensure promotion of sustainable skill transfer.

This study suggest that the Government and Stakeholders should explore ways of establishing a fund for SMCEs financing scheme .They should be putting aside money every financial year to lend SME contractors once a project has been awarded to the contractors without requiring collateral but maybe a form of reasonable insurance must be requested from SME contractors. Government agencies which provide funds for the small business should also extend the facility to construction businesses and improve the turnaround time in processing these funds application by "slimming down" the bureaucracies.

The study suggest that financial institutions should adopt measures to create more credit facilities for small businesses and tailor-make them to fit the requirements of the small and medium construction enterprises. In addition, the financial institution should package a suitable credit facility to finance the operations of the business in order to address problems and challenges faced by small and medium construction enterprises.

The SMCEs should also explore the possibility of merging with others that have similar businesses, negotiate favourable credit purchases from the supplier, source affordable loans from financial institutions and negotiate advance payments from the clients.

5.6 **Suggestions for further Studies**

There is need for further research. This will help identify many constraints Small and Medium contractors are facing. The study addressed itself to the influence of technical skills, management skills, access to capital and tendering on the performance of the contractors. This study was therefore not exhaustive of the many challenges that Small and Medium Construction Enterprises (SMCEs) go through and therefore would recommend research in this area. This will help identify many constraints construction SMCEs in Kenya are facing. The areas include:

1. Construction institutional weaknesses including on the influence of government policies especially Public Procurement and Disposal Act of 2005 on the performance of Small and Medium Construction Enterprises (SMCEs).
2. Study on the use of Contractor Development Models to promote the development of Small and Medium Construction Enterprises (SMCEs) in Kenya.
3. What are the internal and external sources of finance available to the Small and Medium Construction Enterprises (SMCEs)?
4. Use of contractor's registers to measure the competitiveness of Small and Medium Construction Enterprises (SMCEs).
5. Does ownership affect construction firm performance?

REFERENCES

- Abdelsamad, M., & Kindling, A. (1978). Why small business fail. *S.A.M. Advanced Management Journal*, spring 1978
- Abdullah, M. & Bakar, M. (2000). Small and Medium Enterprise in Asian Pacific across the Globe. A New Database (No. 3127), Washington, DC: World Bank
- Acs, Z. & Audretsch, D. (1990). *Innovation and Small Firms*, the MIT Press, Agenda., In Abdullah M. & Baker M. (Ed.). *Small and Medium Enterprises in Asian Pacific Countries* (Vol. I: Roles and Issues). Nova Science Publishers Inc
- Aniekwu, A. & Okpala, D. (1988). The Effect of Systematic Factors on Contract Services in Nigeria; *Construction Management and Economics*, Vol.6; London: E&FN Spon; pp 171-182
- Aryeetey, & Nissanke, M. (1998). *Financial Integration, Development Liberalisation and Reform in Sub-Saharan Africa*. Routledge. London.
- Ayyagari, M., Beck, T & Demirguc-Kunt, A. (2003). Small and Medium Enterprises Across the globe. *World Bank working paper*
- Beaver, G. & Jennings, P. (2000). 'Small Business, Entrepreneurship and Enterprise Development', *Strategic Change*, Vol.9 (7), 397-403
- Birch, D. (1989). 'Change, Innovation and Job Generation', *Journal of Labour*
- Brouthers, K. Andriessen, F. & Nicolaes, I. (1998). 'Driving Blind: Strategic Decision making in Small Companies', *Long Range Planning*, Vol. 31 (1), 130-138

- Buys, S. (2004). *Building maintenance management systems in South African Tertiary Institutions*. (Unpublished PhD thesis). Port Elizabeth: University of Port Elizabeth
- Chakonta, D. (2007). TEVETA presentation paper at the 2007 Annual Construction Indaba: Lusaka, Zambia
- Cheryl, C. (2008). Turner Construction Company: reaching out to CIDB, (2004).South African Construction Industry Status Report- Synthesis Review on the South African Construction Industry and its Development: A Discussion Document. CIDB: Pretoria, South Africa
- Chilipunde, R. (2010/ *Constraints and Challenges faced by Small, Medium and Micro Enterprise Contractors in Malawi*. (Unpublished Report)
- Chilipunde, R. (2007). *Assessment of emerging contractors in Malawi*. (Unpublished BSc honours treatise). Port Elizabeth: Nelson Mandela Metropolitan University
- Chiocha, C. (2009). *Corruption and its effects on the development of the construction industry in Mj/aw/*.(Unpublished Master of Science degree treatise). Port Elizabeth: Nelson Mandela Metropolitan University
- CIDB, (2006). In Focus; Newsletter of the Construction Industry Development Board, March. 2006
- CIDB. (2004).SA Construction Industry Status Report -2004: Synthesis Review on the South African Construction Industry and its Development Discussion Document, South Africa

- CIDB, DPW, CETA. (2005). Towards a common framework for enterprise performance and sustainability. Sustainable contractor development, National Workshop 2005, Pretoria
- Clough, H. (1986). Construction Contracting, New York: John Wiley & Sons, 1986. *ENR (Engineering News Record)* published weekly by McGraw-Hill, New York, Janice Lyn Tuchman, Editor-in-Chief
- Crafford, G. (2002). *Design teams views on quantity surveying competencies*. (Unpublished MSc (QS) dissertation). Port Elizabeth: University of Port Elizabeth
- Cromie, S. (1991), Marketing planning in small enterprises: a model and Some empirical evidence, *Journal of Marketing, Mo\.* 5(1), 33-49
- Crosswell, J. & McCutcheon, T. (2001). Small Contractor Development and Employment: A Brief Survey of Sub-Saharan Experiences in relation to Civil Construction, Proceedings of the First International Conference in Employment Creation in Development. 2-5 April 2001. Johannesburg: University of the Witwatersrand
- Culkin, N. & Smith, D. (2000). "An Emotional Business: A Guide to Understanding the Economic Background and Academic Infrastructure".
- Day, J. (1997). 'The value and importance of the small firm to the world Economy'. *European Journal of Marketing*, Vol. 34(9/10): 1033-1037
- Department of Public Works. (1999). Creating an enabling environment for Reconstruction, Growth and Development in the construction industry. *The White Paper*. Government. Pretoria: South Africa

- Dlungwana, D. & Rwelamila, P. (2003). *The role of performance assessment tools in improving contractor performance in developing countries*. CSIR Boutek: Pretoria
- Dlungwana, D. and Rwelamila, P. (2002). The Role of the Performance Assessment Tools in improving Contractor Performance in Developing Countries. 1st CIB-W107 International conference. Creating a Sustainable Construction Industry in Developing Countries. 11-13 November 2002. Stellenbosch, South Africa
- Dlungwana, D., Noyana, C. & Oloo, V. (2004). *The Emerging Contractor Development Model - Planning and Implementation Manual*. CSIR Boutek: Pretoria
- Frankfort-Nachmias, C. & Nachmias, D. (1996/ *Research Methods in the Social Sciences*: London, Anold
- Frank, H. & Landstrom, H. (1998). Entrepreneurship and Small Business in Europe. *International Journal*, Vol. 3 (3), 145-157
- GOK. (2011). National Construction Authority Act, 2011. Nairobi: Government Printer
- GOK, (2009). Economic Survey. Nairobi: Government Printer
- GOK, (2007). Kenya Bureau of Statistics. Nairobi: Government Printer
- GOK, (1989-1994). National Development Plan. Nairobi: Government printer
- GOK, (2005). Sessional Paper No.2. Nairobi: Government printer
- Gounden, S. (2000). *The impact of the National Department of Public Works' Affirmative procurement policy on the participation and growth of affirmable business*

- enterprises in the construction sector*: (Unpublished PhD thesis). University of Natal, Durban
- Greenbank, P. (2000). Training micro-business owner-managers: a challenge to current approaches. *Journal of European Industrial Training*, 403-411
- Hall, G. (1995). *Surviving and Prospering in the small firm sector*. London: Routledge
- Haswell, S. & Holmes, S. (1989). Estimating the Small Business Failure Rate: A Reappraisal, *Journal of Small Business Management* 27 July
- Hendrickson, C. & Tung, A. (1989). *Project Management for Construction*, Englewood Cliffs, New Jersey: Prentice-Hall.
- Hillebrandt, P. (1999). Problems of Larger Local Contractors: Causes and possible remedies. Unpublished paper presented at the Second Meeting of CIB TG29, Kampala: Uganda
- Howard, J. (1997). 'More Time for Business: Statement by the Prime Minister, the Hon Huntington, NY, pp. 193-210
- Hashim, K. & Abdullah, S. (2000). Development of SMEs: Research issues and Agenda, In Abdullah, M. & Bakar, M. (Ed). *Small And Medium enterprises in Asian Pacific countries*, pp. 193-210 O. Huntington, NY, nova science publishers
- International Labour Organization. (2001). *The Construction Industry in the Twenty-first Century: Its image, Employment Prospects and Skill Requirements*. Geneva
- Jaafar, M. & Abdul-Aziz, A. (2005/ *Resource Based View and Critical Success Factors: a Case study of Small and Medium Sized Contracting Enterprise (SMCEs) in Malaysia*. Available from <http://www.bre.polyu.edu.hk/criocm/english/journal>

- Kabue, M. (2011). *Factors influencing women involvement in implementation of Community Development Projects. A case of Wanyororo Integrated Sustainable Development Unit.* (Unpublished M.A project). University of Nairobi
- Kayanula, D. & Quartey, P. (2000). *The policy environment for promoting small and medium-sized enterprises in Ghana and Malawi.* Retrieved from <http://www.man.ac.uk/idpm/> (Accessed on 23 March 2012)
- Kesper, A. (2000). *Failing or not aiming to grow? Manufacturing SMMEs and their contribution to employment growth in South Africa.* (Unpublished Report). The Department of Trade and Industry: Pretoria
- Khoza, R. (2008). *The construction industry is a tough environment.* Retrieved from <http://www.cidb.co.za>. Retrived (Accessed on 20 March 2012)
- King, K. & McGrath S. (2002). Globalisation, Enterprise and Knowledge: Educational Training and Development, *International Review of Education*, Vol. 50(1), 74-76(3)
- Knapp, T. (1985), *Validity, Reliability and Neither.* *Nursing* 34(3): 189-192 Bunbury Road UK
- Kotler, P. (2000). *Marketing Management*, , Upper Saddle, NJ: Prentice Hill ,USA
- Krejcie, R.& Morgan, D. (1970). Determining sample size for research activities, *Educational & Psychological measurements*
- Lamont, J. (2001). Shortage of skills will curb performance in S Africa: [London edition]. *Financial Times*. 10. Retrieved May 17, 2008, from ABI/INFORM Global database. (Document ID: 87576879). London

- Leedy, P & Ormorod, J. (2000/ *Planning and design, Practical research*. 7th Edition:
New Jersey Mervil, Prentice Hall
- Levy, B. (1996). *South Africa: The business environment for South African's
Industrial Small and medium Enterprises*, The Southern African Department,
World bank, Washington
- Maina, J. (2011). *Social and Economic factors influencing community Participation in
the implementation of Fish Farming Project, a case of Embakasi
Constituency: Kenya*. (Unpublished M.A Project). University of Nairobi,
Kenya
- Mbogo, M. (2011). Influence of managerial accounting skills on SMEs on the success and
growth of small and medium enterprises in Kenya. *Journal of Language,
Technology & Entrepreneurship in Africa*, Vol.3 (1) p. 109-132
- Ministry of Public Works and Roads- Swaziland. (2007). Swaziland Today. Retrieved
from [http:// www.gov.sz](http://www.gov.sz). -Accessed: 12^h January 2012
- Moss, I. (2007). An investigation of training and mentoring of emerging contractors in
the Eastern Cape. (Unpublished MSc treatise). Port Elizabeth: Nelson Mandela
Metropolitan University
- Motlanthe, P. (1990). Critical needs of emerging contractors. *African builder contractor*,
2(1):pp. 15-16
- Mphahlele, G. (2001). Contractor Development in South Africa. Conference on
Developing the Construction Industries in Southern Africa. DPW
- Mugenda, O. & Mugenda, A. (2003). *Qualitative and Quantitative approaches. Research
Methods*. Africa Center for Technology Studies (Acts) Press. Nairobi: Kenya.

- Mvubu, M. (2009). *Assessment of the Performance of Small Contractors in Swaziland*. (Unpublished Masters Dissertation). University of Johannesburg
- Myers, D. (2004). *Construction economics: A new approach*. London: Spon Press
- Ngala, J, Adegoke, I. & Otiena, F. (2005). *Evaluating Project Management Techniques in Small, Medium enterprises*. Johannesburg
- Nissanke, M. (2001). Financing enterprise development in sub-Saharan Africa; *Cambridge Journal of Economics*. Vol 25:p.343-367
- Njuguna, B. (2008). The Construction Industry in Kenya and Tanzania; Understanding Mechanism That Promote Performance .ESAM DBA Assignment. Available from <http://www.roundtableafrica.net>. (Accessed on 25th November 2011)
- O'Brien, J., John, A. & Frank, W. (1996). *Standard Handbook of Heavy Construction, 3rd edition*, New York: McGraw-Hill
- Ofori, G. (2007). Construction in Developing Countries. *Construction Management and Economics*, Vol. 25: 1. 1-6
- Ofori G. (2001). Challenges Facing Construction Industries in Southern Africa. Proceedings of Conference on Developing the Constructions Industries of Southern Africa, Pretoria South Africa
- 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

- Orodho, A. (2003). *Essentials of Educational and Social Science Research Methods*. Nairobi: Mazola Publishers
- Orodho, A. & Kombo, D. (2002/ *Research Methods*. Nairobi: Kenyatta University, Institute of Open Learning
- Peacock, R. (2004). *Understanding small business: Practice, theory and research*, Adelaide: Scarman Publishing
- Permanent Secretary. (2007). *Procedures For Registration and Upgrading Of. Building contractors*. Ministry of Public Works, Nairobi: Kenya
- Ramokolo, B. and Smallwood, J.J. (2008). The capacity of emerging civil engineering contractors. *ACTA Structilia*, Vol.15 (2): pp. 5-28
- Republic of Zambia. (2005). Requirements in Sub-Saharan Africa: a focus on Zambia. Emerald Group.. Lusaka Research, 10 (1), 33
- Rotter, J. (1996). Generalised experiences for internal versus external control of reinforcement *Psychological monographs*, Vol. 80(1), 1.27
- Rwelamila, P. (2002). African Construction Industries in Turmoil? Implications for Nepad, Proceedings, 1st CIB-W107 International Conference on Creating a Sustainable Construction Industry in Developing Countries, 11-13 November 2002, Stellenbosch, South Africa
- Said, K. and Hughey, J. (2001). Managerial Problems of small firms. *American Journal of small businesses*, 27-42

Sentongo, J. (2005). *Causes of poor performance and sometimes outright failure among citizen contractors in Botswana*. (Unpublished MBA Dissertation). University of DeMenfort

Shawa, D. (2009). Chairman's message. *NCIC Magazine*, pp. 1

Shakantu, W. & Kajimo-Shakantu, K. (2007). The South African Construction Micro-Enterprise development challenge; in Proceeding of the CIB 2007 World Building Congress, Construction for Development, Cape Town International Conventional Centre, Cape Town, South Africa, 14-17 May 2007, pp. 1902-1915

Sibanda, G., (1998). *Creating an enabling environment for small-scale contractors*, ILO/ASIST, Harare

Ssegawa J. (2007). Study into the causes of poor performance of public construction projects in Botswana. Research report, Faculty of Engineering and Technology, University of Botswana

Ssegawa, J. (2008). *Adequacy Of Project Based Financial Management Systems of Small and Medium Construction*. University of South Africa (Unisa)

Storey, D. (1994). *Understanding the Small Business Sector*. London: Routledge

Suganthi, L. & Anand, A. (2008). *Total Quality Management*. New Delhi: Prentice-Hall of India

The Republic of Zambia Fifth National Development Plan 2006 - 2010 Summary

The Zambia Business Forecast Report. (2008). Business Monitor International [BMI]: Schneider Markus - BMI Head of Africa Country Risk. Lusaka

- Thompson, K. (1991). Facing an uphill battle. B.E. Special Report on Small Business. Black Enterprise, Nov 19, Vol. 22 Issue 4
- Thwala, D. & Phaladi, J. (2009). An exploratory study of problems facing small Contractors in the North West province of South Africa *African Journal of Business Management* Vol.3 (10), pp. 533-539, Available from; <http://www.academicjournals.org/aibm> (Accessed on 29th December 2011)
- Thwala, D. & Phaladi, J. (2008/ Critical Success Factors for Small and Medium Sized Contractors in North West Province, South Africa. 5th Post Graduate Conference on Construction Industry Development, 16-18 March 2008: Bloemfontein, South Africa
- Upton, A. (1987). *Financial Management for Contractors*, BSP Professional Books, Oxford:U Adrian JJ (1986/ *Construction Accounting*, Prentice-Hall. USA
- Walker, E. & Webster, B. (2007). Gender, age and self-employment: Some things change, some stay the same. *Equal Opportunities International*, 22(2): 122-135
- Wanjohi, A. & Mugure A. (2008/ *Factors affecting the growth of MSEs in rural areas of Kenya*. A case of ICT firms in Kiserian Township, Kajiado District of Kenya
- Wang, C, Rowe, M & Cripps, H (2006). *Collaborative commerce for SMEs: Field data*. Available from: <http://www.bre.polyu.edu.hk/cricm/english>.(Accessed on 12th January 2012)
- Wijewardena, H. & Tibbis, G. (1999). Factors contributing to the growth of small manufacturing firms: *Australia. Journal of Small Business Management*. 37(2): 88-95
- Yisa, S. Ndekugri, I.& Ambrose, B. (1995). Marketing function in UK construction

contracting and professional firms. *Journal of management in Engineering*, ASCE, Vol. 11 (4),27-33

Young, B. & Hall, G. (1991). Factors associated with insolvency amongst contractors in the Construction industry. *Building Research and Information*, Vol.9 (5), 315-318

Yusoff, A. (1995). Critical Success Factors for Small Business: Perception of South Pacific Enterprises. *Journal of Small Business Management*, Vol.33 (3), 68-73

APPENDICES

APPENDIX I

LETTER OF TRANSMITTAL ON DATA COLLECTION INSTRUMENTS

Karua Fredrick Ndaire,
P.O. Box 2229,
Thika.

Dear Sir/Madam,

Re: Factors Influencing Performance of Small and Medium Construction Enterprises in Embu County

I am a Master of Arts (Project Planning & Management) student at the University of Nairobi - Thika Extra- Mural Centre. My registration Number is L50/64801/2010. I am conducting a study titled 'Factors Influencing Performance of Small and Medium Construction Enterprises in Embu County.

To facilitate this study, you have been randomly selected as a participant in answering the questionnaire. You are requested to respond to all the questions as your response will be very useful to this study.

Please be assured that any personal information will be treated with utmost confidentiality.

Thank you for your participation.

Yours faithfully,

Karua Fredrick Ndaire.

APPENDIX II

QUESTIONNAIRE FOR OWNERS OF THE SMALL AND MEDIUM CONSTRUCTION ENTERPRISES.

This questionnaire is to be completed by owner of the company. It seeks to investigate the factors influencing performance of small and medium construction enterprises.

Kindly answer all questions as honestly and as fully as you can.

Part One: Background Information

Demographic: Choose the suitable answer and tick (S) the option that is most appropriate to you.

1. Gender

Male •

Female •

2. Age

20-29 yrs •

30-39 yrs •

40-49 yrs •

50-59 yrs •

60 yrs & above Q

3. Highest education qualification

Diploma

Degree

Masters •

PhD Q

Other Q

4. Category of Registration

H •

G •

F •

E •

D •

C •

Part TWO: Technical Skills

Q5. Do you have technical skills in managing your firm?

Yes • No •

Q6. What is your greatest challenge in managing you firm?

Q7. Who manages your technical records?

- My self •
- An employee accountant
- An external Accountant
- No specific person

Q8. Kindly rate the extent to which the following technical skills contribute to the performance of your Construction business.

Very Great =5; Great = 4; Not sure = 3; Rarely = 2; Not at all = 1

Skills	5	4	3	2	1
Financial forecasting Management Skills					
Profitability ratios Interpretation Skills					
Cash flow Management Skills					
Working Capital Management Skills					

Part THREE: Management Skills

Q9. Do you use any strategic plans in managing your business performance strategy?

Yes • No •

Q10. To what extent do you plan your human resources?

- Very great
- Great •
- Not much •
- Not at all •

Q11. Do you have capital assets inventory Control register?

Yes Q No Q

Q12. To what extent do you delegate the following duties?

Always =5; Occasionally = 4; Not sure = 3; Rarely = 2; Not at all = 1

Duties	5	4	3	2	1
Finances					
Human Resource Recruitment					
Capital Assets Management					
Procurement of Materials					

Q13. To what extent do you think your Management skills have contributed to you business performance

Very great

Great •

Not much

Not at all •

Part FOUR: Access to Capital

Q14. How much do you find access to working capital a challenge?

Very Much •

Much •

Not Much •

Not at all •

Q15. To what extent do you find access to capital asset finance a challenge?

Great extent [—j

Great j—j

Not much

Not at all

Q16. Have there been times that you could not Bid for contract due to insufficient funds?

Yes • No •

Q17. As a contractor how much do you find access to your Business capital constraining your Construction business performance?

Very Much d]

Much •

Not Much •
 Not at all •

Tart FIVE: Tendering Procedures

Q18. Do you have a records registry for your construction business?

Yes • No •

Q19. How effective is your records management System when tendering for the business?

Very effective CD
 Effective Q
 Not much [—]
 Not at all [—]

Q20. As a contractor has your business been able to bid for higher bids in the last one year?

Yes • No •

33 Q21. To what extent do you encounter following challenges in tendering for new Contracts

Very Great =5; Great = 4; Not sure = 3; Rarely = 2; Not at all = 1

Challenges	5	4	3	2	1
Financial Challenges					
Technical Capacity					
Legal Requirements					
Political Influence					

Q22. Kindly rate the extent to which your tendering has facilitated performance of your business

Very Great [—j
 Great •
 Not much •
 Not at all •

Part SIX: Performance of Small and Medium Sized Contractors

Q23. In the last five years has your business grown in the following areas?

Capability • Registration category •

Q24. From your experience as a contractor what are the main challenges that are faced by class C-H in their attempt to grow professionally?

I

II

Q25. Kindly rate the influence of the following aspects on the performance of your construction business?

Very Great =5; Great = 4; Not sure = 3; Rarely = 2; Not at all = 1

Aspects	5	4	3	2	1
Technical Skills					
Management Skills					
Access to Capital					
Tendering Procedures					

Thanks for your assistance it will be greatly appreciated.

APPENDIX III

KREJCIE AND MORGAN SAMPLE SIZE TABLE:

TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size

"S" is sample size.

Krejcie, R. and Morgan, D. W., (1970). "Determining Sample Size for Research Activities", Educational and Psychological Measurement.

APPENDIX IV

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY
AUTHORIZATION PERMIT LETTER

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241149
254-020-310571, 2213123, 2219420
Fax: 254-020-318245, 318249
When replying please quote
secretary (@ncit.fo.ke

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

NCST/RCD/14/012/908

6th July 2012

Our Ref:

Date:

Karua Fredrick Ndaire
University of Nairobi
P.O. Box 30197
Nairobi

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*Challenges facing performance of small and medium building construction enterprises in Embu County*" I am pleased to inform you that you have been authorized to undertake research in **Embu County** for a period ending **31st August, 2012**.

You are advised to report to **the District Commissioner and the District Education Officer, Embu County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, I'hft-HSe.
DEPUTY COUNCIL SECRETARY

Copy to:
District Commissioners
District Education Officers
Embu County.