



**CONSTRAINTS AND CHALLENGES FACED BY SMALL,
MEDIUM AND MICRO ENTERPRISE CONTRACTORS IN
MALAWI**

A treatise submitted to the Faculty of Engineering, the Built Environment and Information Technology, Nelson Mandela Metropolitan University, School of the Built Environment in partial fulfilment of the requirements for the Degree of Magister Scientiae in the Built Environment: Project Management.

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ABSTRACT

Small, medium and micro enterprises (SMMEs) are an important sector of any construction economy. The need for efficient SMMEs is well documented and cannot be over-emphasised. SMMEs are vital in their contribution to employment creation and value reorientation. However, their in process operations are not well understood and have rarely been addressed. The aim of this research was therefore to establish a base level of understanding of the operational core-face of SMMEs in Malawi. The methodology used included an extensive literature review and field survey conducted on 52 SMMEs. The field survey used the questionnaire instrument and random sampling. The critical findings from the literature were that there are binding constraints in the operations of SMMEs. The field survey confirmed the issues raised in the literature and posited the operational challenges as lack of finance, training and business skills; limited skills in Construction Information Technology (IT), and prevalence of unethical conduct amongst some of the stakeholders. The findings make an invaluable contribution to the search for solutions to the problems faced by construction SMMEs in Malawi and provide insight for further research in institutional weaknesses and policy issues regarding in this part of the world. The implications of the findings are that unless the limitations named above are resolved, SMMEs in Malawi will continue to experience poor growth and competitiveness. The recommendations include the developing of training programmes in business management, introduction of sector specific financing programmes and the provision of an appropriate regulatory and legislative framework. By establishing the core issues affecting the operations of SMMEs in the Malawian construction industry, the research has contributed to the enhancement of the understanding of this elusive subject.

DECLARATION BY STUDENT

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DECLARATION:

In accordance with Rule G4.6.3, I hereby declare that the above-mentioned treatise is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

SIGNATURE:

DATE:

STATEMENT OF ORIGINALITY The research for the compilation of this treatise entitled “Constraints and challenges faced by Small, Medium and Micro Enterprise Contractors in Malawi” has been carried out solely by me, except for references to acknowledge sources as listed in the references section. The sources of information comprise both primary and secondary data. This treatise is my own work and has not been submitted to another university.

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DEDICATION

I dedicate this work to:

- My late brothers: Michael, Andrew, Darlington, Khayira and Isaac; and
- My late sister, Winnie.

You occupy a special place in my heart until we meet again in the Heavenly Kingdom.

May your souls rest in peace.

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ABBREVIATIONS

ABCEC:	Association of Building and Civil Engineering Contractors
ABET:	Adult Basic Education and Training
ASGISA:	Accelerated Shared Growth Initiative for South Africa
BCI:	Black Construction Industry
CETA:	Construction Education and Training Authority
CIDB:	Construction Industry Development Board
CIP:	Contractor Incubator Programme
DPW:	Department of Public Works
EC:	European Commission
ECDP:	Emerging Contractor Development Programme
EO:	Executive Officer
FET:	Further Education and Training
FPB:	Forum of Private Businesses
GEM:	Global Entrepreneurship Monitor
GET:	General Education and Training
HIV:	Human Immunodeficiency Syndrome
ILO:	International Labour Organisation
IT:	Information Technology
LISO:	Library Services Officer
MCP:	Malawi Congress Party
MP:	Member of Parliament
NAFCOC:	National African Federation Chamber of Commerce
NASSC:	National Association of Small Scale Contractors
NCCT:	National Construction Council of Tanzania
NCICM:	National Construction Industry Council of Malawi
NRA:	National Roads Authority
PAC:	Public Affairs Committee
RA:	Roads Authority
RFA:	Road Fund Administration
SAQA:	South African Qualifications Authority
SEDA:	Small Enterprise Development Agency

SMME: Small Medium and Micro Enterprise
UDF: United Democratic Front
USA: United States of America
USAID: United States of America International Development

CHAPTER 1: INTRODUCTION

1.0 Background

The construction industry, by nature, has many peculiar problems and requirements (Ofori, 2009). For instance Kapulula (2008), Kayanula and Quartey (2000), Ngoma (2006) and Ofori (2009) reported that the construction industry in Malawi has been dogged by many problems including mismanagement, skills shortage, corruption, lack of technology, inflexible credit terms, late payments to contractors and difficulties in accessing finance. In addition dissatisfied clients have been complaining about the under-performance and shoddy workmanship, especially that of the SMMEs.

Under-achievement is causing growing dissatisfaction amongst industry clients (DETR 1998) in both the private and public sectors. Projects have largely not been delivered on time, budget and expected quality standards. In short, construction too often fails to meet the needs of modern businesses and impacts on their competitiveness in international markets and rarely provides best value. Construction must improve its performance and achieve its objectives and targets in terms of predictability, cost, time and quality (Ofori, 2009).

It is therefore important for construction to take measures to improve performance. This has now been recognised by several countries at various levels of socio-economic development. Kululanga, Price and McCaffer (2002) posited that contractors could learn from their past, by consciously undertaking structured reviews, extracting and codifying knowledge, and identifying the critical success factors.

SMME contractors must carefully chronicle lessons learned. Such undertakings must be aimed at acquiring vital lessons that have immediate and future implications. The concept of a project closeout review which is aimed at acquiring vital lessons influencing current and subsequent project success is hardly new. In fact, Soibelman, Liu, Kirby, East and Lin (2003) suggest that the construction industry should formalise project process review procedures. Such process review instruments would aim at addressing the under-performance that continues to undermine current and future SMME contractor projects.

Hernes (1998) observed that the construction industry, in developing countries such as Malawi typically employs 5-10 percent of the direct workforce in addition to employment in the various industries which have linkages with construction. Moreover, it is responsible for creating at least half of most countries' fixed assets, including health centres, schools, administrative buildings and infrastructure. It is therefore of national importance that it is run competently at all levels. The study investigated challenges and constraints faced by small, medium and micro enterprise (SMME) contractors in Malawi. It further investigated the business ethics among some SMME contractors.

1.1 Statement of the problem

Malawian SMMEs face a host of constraints and challenges.

Hardly a week passes without an article in the daily newspapers highlighting the shortfalls of SMME contractors work. This is largely blamed on the many limitations SMME contractors are facing. Many citizens have condemned some of the work carried-out by SMME Contractors and yet the government is advocating that construction professionals should form SMMEs with an aim of reducing unemployment and accelerate infrastructure development.

1.2 Statement of sub-problems

1.2.1 Sub-problem one

SMME contractors lack training.

Training is a very important aspect of any business in order for a firm to succeed. The lack of well trained personnel can be detrimental to the success of the firm. CIDB (2008b) states that there is an indisputable link between the quality of projects delivered by contractors and skills. The board believes that formal education and skills development is the key to a better construction industry in South Africa.

1.2.2 Sub-problem two

SMME contractors lack access to finance.

According to Kayanula and Quartey 2000, capital is a major problem facing SMMEs in Malawi and Ghana. Carson (2006) argued that the difficulties that SMME contractors have in attracting finance; strongly affect the performance of their work. They lead to a variety of sub-optimal situations where construction operators delay construction, work with the wrong type of equipment and sometimes pull out because of sudden financial problems.

1.2.3 Sub-problem three

SMME contractors lack business management skills.

Management expertise is claimed to be one of the most scarce 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 SMME contractors' development and growth (Kayanula & Quartey, 2000, and Ramokolo and Smallwood, 2008)

1.2.4 Sub-problem four

SMME contractors lack information technology skills.

Many commentators and researchers have taunted the arrival of Information Communication Technology (ICT) as a way forward to expedite infrastructure development. However, various researchers have concluded that the construction industry is lagging far behind other industries in employing ICT as a major catalyst for improving productivity and job creation (Sun & Howard, 2004; Mesarić, 2007 and Adejimi, 2009).

1.2.5 Sub-problem five

SMME contractors indulge in unethical business behaviour.

The contractors need to market themselves and the pressures involved in winning the tender lead to the unethical practices. In this lies the value of studying the moral aspects of business behaviour. Ray *et al.* (2000) further said that an understanding of the ethics of tendering can help codify, and finally simplify, one aspect of the very complex support system of contract bidding in construction.

1.3 Hypotheses

1.3.1 Hypothesis one

There is a lack of training opportunities among construction SMMEs.

1.3.2 Hypothesis two

SMME contractors lack collateral needed to access finance.

1.3.3 Hypothesis three

There is a lack of business management skills among SMMEs.

1.3.4 Hypothesis four

SMME contractors do not use construction software.

1.3.5 Hypothesis five

SMMEs contractors do not conduct business ethically.

1.4 Assumptions

- There are training institutions in Malawi to train SMMEs;
- SMME contractors do not have collateral to access finance;
- SMME contractors are not trained in business management skills;
- There is an availability of construction software; and
- SMME contractors do not conduct their business unethically.

1.5 Importance 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 Malawi government has affirmed this concept by establishing the NCICM to oversee the construction industry and National Roads Authority (NRA) to oversee civil engineering works. The two organisations it is

assumed, through processing of information and evolution of organisational machinery will ensure effectiveness and efficiency in the Malawi Construction Industry.

SMME contractors in the construction industry have a direct impact on skilled and unskilled employment. It is therefore important that constraints contractors face are identified and analysed to ensure that unemployment is reduced to acceptable levels and also to ensure that structures erected are worth their value for money.

1.6 Delimitations

Contractors in Malawi are grouped according to experience, financial capabilities and technical skills. The study investigated small, medium and micro enterprise contractors that are registered in the categories of MK75 million and below in the building category and MK50 million and below in the civil engineering contractor category. Contractors are not allowed to tender for projects that cost more than the category in which they fall. The assumption is that the contractor, for example in the MK75 million category does not have the capacity to handle projects worth more than MK75 million. The same principle applies to civil engineering contractors. A contractor in the MK50 million category is not allowed to tender for jobs beyond the MK50 million limit.

The contractor should be registered with the National Construction Industry Council of Malawi (NCICM) and should have paid its annual membership fee. The NCICM is a government organisation formed by Act parliament No.19 of 1996. In a recent article, NCICM (2000) states that its aim is to develop the construction industry by:

- Registering contractors and consultants;
- Training personnel;
- Mentoring small and medium contractors; and
- Improving construction professionalism in general.

1.7 Definition of terms

Contractor: Civil or building contractor.

Competency: Competency is defined Moss (2007) as a skill that is needed in a particular job or for a particular task. For the purpose of this study, competency can be defined as the skill and knowledge needed in construction related subjects.

Scheme: Regulation of contractors by government through the National Construction Council (NCIC) of Malawi.

Literacy: Moss (2007) defines literacy as the ability to read and write or the ability to use language proficiently. For the purpose of this study, literacy can be defined as the knowledge of or competency in a construction related subject or area of activity.

Gautrain: A proposed passenger railway line from Pretoria to Johannesburg, leading to O. R. Tambo (formerly Johannesburg) international airport.

Training: Training is defined by Moss (2007) as the process of learning the skills that you need to do a job. For the purpose of this study, training is the academic classroom instruction offered in related subjects.

Cession: In obtaining materials, SMME contractors surrender portions of their tenders or contracts to the materials suppliers. The basis of this arrangement is that the money that the contractor makes from the project is deposited directly into the bank account of the materials supplier and the SMME contractor gets the remaining balance after deductions have been made (CIDB, 2009).

1.8 Organisation of the treatise report

Chapter 1 serves as an introduction, setting out the problems and the manner in which these are addressed. It provides insight into the nature of the topic and issues relating to SMME contractors in Malawi.

Chapter 2 serves as the literature review section of the report. The chapter provides an in-depth study of SMMEs in construction.

Chapter 3 presents the methodology used for conducting this research.

Chapter 4 presents the responses on the investigation of SMME contractors in Malawi and provides the results of the study and discusses the implications thereof.

Chapter 5 presents the conclusions and relevant recommendations of the study.

CHAPTER 2: REVIEW OF RELATED LITERATURE

2.0 Introduction

Zedtwitz (2002) noted that until recently study of the project review process has not attracted wide spread interest. Most firms seem to have had no established and structured approach to learning from project reviews either during or after the completion of their projects. Furthermore, practitioners have been concerned about the lack of established criteria and guidelines for conducting project reviews.

This study, which is an investigation onto the challenges and constraints faced by SMME contractors in Malawi, provides valuable feedback on the effectiveness of the scheme of regulating SMME contractors. The study offers some suggestions as to how administration can be improved. This is done through a critical analysis of training needs, business skills, financing problems, information technology skills and ethical conduct among SMME contractors.

2.1 The case of SMME contractors

Shakantu, Kajimo-Shakantu, Saidi and Mainga (2006) argued that the SMME business sector consists of either family owned businesses employing very few people or self employed people. Chilipunde (2007) also argued that the SMME contractor is a typical sole-proprietorship firm or, in many cases, a family-owned business with few foremen and mostly casual labour employed as needed. USAID (2009:1) defined the “*micro enterprise as a firm of 10 or fewer employees.*”

Kayanula and Quartey (2000:9) observed that “*.there is no single, uniformly acceptable definition of a small firm. Firms differ in their levels of capitalisation, sales and employment. Hence, definitions which employ measures of size (number of employees, turnover, profitability, net worth), when applied to one sector, could lead to all firms being classified as small, while the same size definition, when applied to a different sector, could lead to a different result.*”

The first attempt to overcome this definition problem was by the Bolton Committee (1971) as reported in Kayanula and Quartey (2000:7) “*.....when they formulated an “economic” and a “statistical” definition.*”

Under the economic definition, a firm is regarded as small if it meets the following three criteria:

- *“Has a relatively small share of their market place”;*
- *“Is managed by owners or part owners in a personalised way, and not through the medium of a formalised management structure”;* and
- *“Is independent, in the sense of not forming part of a large enterprise”.*

The Bolton Committee also devised a “statistical” definition to be used in three main areas:

- *“Quantifying the size of the small firm sector and its contribution to gross domestic product (GDP), employment, exports among others”;*
- *“Comparing the extent to which the small firm sector’s economic contribution has changed over time”;* and
- *“Applying the statistical definition in a cross country comparison of the small firm’s economic contribution”.*

Thus, the Bolton Committee employed different definitions of the small firm to different sectors. Table 2.1 below indicates the various sectoral definitions.

Table 2.1 The Bolton Committee Definitions of Small Firms

Sector	Definition
Manufacturing	200 employees or less
Construction	25 employees or less
Mining & Quarrying	25 employees or less
Retailing	Turnover of £50,000 or less
Miscellaneous	Turnover of £50,000 or less
Services	Turnover of £50,000 or less
Motor Trades	Turnover of £100,000 or less
Wholesale Trades	Turnover of £200,000 or less
Road Transport	Five Vehicles or less
Catering	All excluding multiples and brewery – managed houses

Source: Kayanula and Quartey (2000:7)

Kayanula and Quartey (2000:9) stated that *“...it was against this background that the European Commission (EC) coined the term Small, Medium and Micro Enterprises (SMMEs). The SMME sector forms are made up of three components:*

- *0 to 9 employees - micro enterprises;*
- *10 to 99 employees - small enterprises; and*
- *100 to 499 employees - medium enterprises.*

Thus, the SMME sector is comprised of enterprises (except agriculture, hunting, forestry and fishing) which employ less than 500 workers”.

According to Kayanula and Quartey (2000:9) the definitions are based on the following:

- *Firstly, “based solely on employment rather than a multiplicity of criteria”.*
- *Secondly, “the use of 100 employees as the small firm’s upper limit is more appropriate given the increase in productivity over the last two decades”.*
- *Finally, “the EC definition did not assume that the SMME group is homogenous, that is, the definition makes a distinction between micro, small and medium-sized enterprises”.*

However, it is argued that the EC definition is too all-embracing for a number of countries.

Kayanula and Quarter (2000:9) argued that *“researchers would have to use definitions for small firms which are more appropriate to their particular ‘target’ group (an operational definition). Debates on definitions turned out to be sterile unless size is a factor which influences performance. For instance, the relationship between size and performance matters when assessing the impact of a credit programme on a targeted group”.*

Kayanula and Quartey (2000:10) stated that *“.....in the case of Malawi, the official definition of enterprise sizes dates back to 1992.”* The definition is based on three criteria and these include:

- *The level of capital investment;*
- *Number of employees; and*
- *Turnover.*

Moreover Kayanula and Quartey (2000:10) argued that an enterprise is defined as small scale if it satisfies any two of the following three criteria:

- *“It has a capital investment of ZAR16,000 – ZAR440,000”;*
- *“Employing 5 - 20 people”; and*
- *“A turnover of up to ZAR880,000 (using the 1992 official exchange rate)”.*

Kayanula and Quartey (2000:10) “observed that since this official definition was given in 1992, the economic situation in the country has changed drastically, with the value of the Kwacha falling from an official rate of MK3.60 to US\$1 in 1992 to MK139.00 to US\$1 in 2008 and to MK130.00 as of March 2009. The implication is that the existing official definition is out of date and needs to be revised”.

Shakantu and Kajimo-Shakantu (2007) continued the argument by saying that SMME contractors encompass a very broad range of firms from established traditional families employing 100 people down to self-employed informal enterprises. They state that there are three (3) broad sets of enterprises represented in the SMME sector and these include:

- Survivalist;
- Micro;
- small; and
- Medium enterprises.

The definitions include:

- Berry *et al.* (2002) as in Shakantu, Kajimo-Shakantu, Saidi and Mainga, (2006:3) defined “survivalist enterprise as enterprises, which are mainly informal, operated out of necessity to secure minimal income. Survivalists have little capital and skills and minimal prospects for growth”;
- Berry *et al.* (2002) as in Shakantu *et al.* (2006:3) defined “micro enterprise as individual or family owned businesses engaging in subsistence construction activity such as repairs, renovations and extensions. Micro enterprises almost invariably operate in the informal economy. These enterprises do not pay tax and employ only 1 to 5 individuals. Micro enterprises lack all the trappings of formality”; and
- Berry *et al.* (2002) as in Shakantu *et al.* (2006:3) defined “small, medium and micro enterprises as businesses which, though mainly owner managed, employ between 5-10 and 100-200 people respectively. In the main, SMME contractors fulfil all the trappings of formality”.

Shakantu and Kajimo-Shakantu (2007) argued that a large majority of SMMEs, the micro enterprises and survivalist, are concentrated at the very lowest end of scale. The

South African Construction Industry Status Report 2004 confirms this assertion and reports that the SMME contractors are entering the market at the lower end and in the general building contracting category. In this study, the definition of Kayanula and Quartey (2009) on page 8 was found to be more appropriate to a Malawian case; therefore, this definition has been used for this study.

2.2 The roles and characteristics of SMMEs

Shakantu and Kajimo-Shakantu (2007:4) citing Siddiqi (2005) and Kesper (2000) suggested that SMMEs are the real potential engines of wealth creation, value re-orientation, job creation and poverty eradication in South Africa. There are, therefore, sound economic and social reasons for promoting SMMEs:

- *“Micro enterprises are generally associated with more labour intensive production and are hence perceived to have a high labour-absorptive capacity”.*
- *“From the economic point of view, it is generally believed that optimising the contribution of micro enterprises to employment and economic development could be translated into the following broad objectives”:*
 - *“Raising the rate of formation of new micro enterprises with growth potential and increased contribution to investment, employment and income generation”;*
 - *“Increasing the rate of economic ownership; Increasing the rate of graduation of micro enterprises into SME categories”;*
 - *“Raising the performance of existing micro enterprises with a view to increasing their competitiveness”;* and
 - *“Decreasing the undesirable mortality rate of micro enterprises”.*

USAID (2009) opined that in many countries, microenterprises - small, informally organised commercial operations constitute the majority of businesses. They account for a substantial share of total employment and gross domestic product (GDP) and they contribute significantly to poverty reduction. It is argued that these enterprises are a predominant source of income and employment for hundreds of millions of people worldwide. The SMME sector’s influence on individuals, households and national economies is clear and profound.

Dlungwana and Rwelamila (2003), and Rebelo (2005) stated that the construction industry and SMME contractors play a significant and critically important socio-

economic role in developing countries. It is therefore important that SMME contractors be well equipped to effectively manage their construction enterprises from the perspective of the environment, health and safety, as well as from business sustainability, which contributes to the socio-economic development of local communities and society at large.

According to Kayanula and Quartey (2000:3), and Dlungwana and Rwelamila (2003), *“the dynamic roles of SMME contractors in developing countries cannot be overemphasised. Such enterprises have been identified as the means through which the rapid industrialisation and other developmental goals of these countries can be realised”*. However, Kayanula and Quartey (2000) citing Biggs, Grindle and Snodgrass (1988) noted that some authors have contended that the job creating impact of SMME contractors is a statistical flaw: it does not take into account offsetting factors that make the net impact more modest. It is argued that increase in employment within SMMEs is not always associated with increase in productivity. Nevertheless, the important role performed by these enterprises cannot be overlooked.

SMME contractors have advantages over their large-scale competitors. They are able to adapt more easily to market conditions given the flexibility of their businesses.

2.3 Current barriers to SMME contractor development and growth

Shakantu *et al.* (2007), Uriyo, Mwila and Jensen (2004), and Kapulula (2008) argued that there are many barriers to the development and growth of SMME contractors.

These include:

- Environment regulations;
- Inadequate infrastructure;
- Business regulations;
- Tax and labour; regulations
- Skills shortage,
- Corruption;
- Political interference;
- Choice of technology;
- Lack of collateral; and
- Keen competition for limited opportunities and unsteady supply of work.

These and other barriers are discussed follow.

2.3.1 Information technology – the information age

Sun and Howard (2004) stated that the impact of information technology (IT) on modern society is profound. It is often described as the “Information Revolution.” The driving force behind this is the convergence of computing and telecommunication technology. IT has brought about automation of some routine tasks. In many cases, IT has fundamentally changed the way business is conducted. The pace of change is also unprecedented. Previous social revolutions, such as the industrial revolution, took hundreds of years, to spread out from their original sources, but the “Information Age” spread all around the world and within a single generation. Today, internet access has spread to even the least developed regions of the globe.

Sun and Howard (2004), Uriyo *et al.*, (2004) and adejimi (2009) claimed that information technology (IT) has enabled the globalisation of the economy and facilitated competition. It has subsequently brought about large-scale change in the industrial nations. We have witnessed the rapid growth of some industries such as computer, communications, software and financial services by creating new services and enhancing efficiencies, while other more traditional industries have stalled or even contracted in comparison. As it is transforming the landscape, IT is enabling a major shift in the job market.

Many analysts have noted that for the modern workforce, IT literacy is becoming an essential requirement. Capron (2000) cited in Sun and Howard (2004) stated that IT application in the construction industry and communication technology has radically transformed the way we live, learn, work and play.

2.3.2 Constraints faced by SMME contractors in general

Ngoma (2006) cited the National Roads Authority Annual (NRA) Reports of 2006, which gives a good analysis of the state of road construction in Malawi. The reports mention lessons and challenges concerning work out-put by contractors. The lack of adequate capacity from the construction industry is highlighted. The reports also expose weaknesses in road construction. Targeted standards were not met. Ngoma concluded by saying that training programmes in specialised areas are key to changing

the present status. Khanje (2009), further reported that the Road Fund Authority (RFA) terminated 12 of the 240 contracts entered into with construction firms in 2008 financial year due to various problems, largely “non-performance” on the part of the contractors. According to Buys (2006), one of the biggest problems in the construction industry is that of the endless disputes between the client, the professional team and the building contractors regarding the valuation and payment of the monthly interim certificates. Cheung, Tan, Ndekugri and Harris (2000) noted that resolving disputes has been part of routine management function of project participants. Bonhen (1999) stated that the most significant issues facing the construction manager before litigation or arbitration is invoked are the pricing of variations, disputes regarding payment certificates and the repudiation or cancellation of the contract.

An article by Singini (2008) reported on a meeting held by the RFA with civil engineering consultants and contractors in Mzuzu, Malawi as part of its programme to engage with various stakeholders to help solve problems that develop due to misunderstandings. The meeting offered the opportunity for the stakeholders to raise problems they face. During the meeting, contractors questioned some of the conditions the RFA put into place. Some contractors felt that the conditions were hard on SMME contractors and gave room to big companies that are awarded larger contracts to make big profits. One notable condition which SMME contractors questioned was the requirement of a qualified site agent and foreman with specific qualifications when working on a particular project. It was observed that most SMME contractors are unable to pay the salary of these highly qualified officers.

In a related recent article Munthali (2008) reported on another meeting between the RFA and the Public Affairs Committee (PAC) of parliament. The PAC reported that SMME contractors in the road construction sector failed to fully utilise the allocation for their projects during the previous financial year due to lack of adequate capacity. MPs wanted to know whether SMME contractors could manage road maintenance programmes estimated at MK7 billion, while at the same time taking up new road construction projects. The Executive Officer (EO) observed that capacity was the problem. The EO cited the lack of qualified personnel, lack of equipment and financial capacity. The EO suggested that joint ventures among SMME contractors might solve problems faced by these contractors.

Edmond and Miles (1994) investigated the role that SMME contractors play in the construction industry in developing countries. The growth of a country is linked to an increase in productivity of SMME contractors in the construction market. Specific areas where SMME contractors could improve their efficiency and profitability, for example, site organisation, were identified. A key constraint was the need for up-grading the managerial and technical competencies of the contractors. The first step would be to appraise the contractors of skills gaps in their workmen. This would be followed by a properly planned programme to meet the identified training needs. The dominance of foreign contractors creates what is referred to as the “Missing Middle” of the contracting business. There is therefore an opportunity for SMME contractors to develop their market share and to become medium size. They would however have to improve to compete with large foreign contractors.

ILO (2006) proposed a set of guidelines for the development of SMME contractors in developing countries. The study not only acknowledged the potential contribution of SMME contractors to the growth and efficiency of the local economy, but also identified major constraints facing the construction industry sector. The constraints were classified as difficulties presented by:

- A particular market and the business environment in which the contractor is operating (for example steady availability of work, material and labour);
- Client/consultants (for example incomplete design information and delayed payment); and
- Shortcomings and inadequacies of the contractor (for example, knowledge and familiarity with technical, legal, financial and managerial issues).

The ILO (2006) study highlights deficiencies in planning and management skills as the greatest stumbling block among SMME contractors and advocates simple planning and record keeping tools which make a marked difference in the success of SMME contractors.

Mentor (1985) investigated the usefulness and the empirical application of project planning and control techniques to SMME contractors in South Africa. Among Mentor’s important findings are that SMME contractors do not:

- Pay sufficient attention to formal planning and control of operations;
- Keep proper records of the progress of jobs; and

- Record important duties and instructions in writing.

While Mentor (1985) indicated that small businesses do not have the resources and time to install and maintain extensive record keeping facilities, he insisted that managers of SMME contractors should plan their operations thoroughly. The survey also revealed personnel problems as most prominent, followed by poor administration, lack of management experience and issues relating to clients and the suppliers of material.

Cattell (1993) maintains that inadequate documentation is a source of much dissatisfaction in the construction industry, mainly because existing contracts are biased in favour of the client and professionals. Wells (1986) cited in Chilipunde (2007) also examined the construction industry in developing countries and concluded that highly developed managerial and supervisory skills are crucial for the efficient execution of construction projects. Cattell (1993) listed the basic skills that a successful contractor should have as:

- Ability to read and interpret drawings;
- Ability to understand the complexity of tendering and contractual procedures;
- Knowledge of insurance, bond and other legal necessities; and
- Having secure, sufficient working capital and material credit to finance projects, whether payment by clients is delayed or not.

The results of the survey stressed the need for a training element in all programmes to improve the capability of SMME contractors.

In a Development Bank of Southern Africa (DBSA) series, Milne (1994) suggested that major shortcomings exhibited by SMME contractors are only a symptom of existing constraints faced by these contractors as they try to deal with standard planning, tender procedures, contract documentation and construction methods that have been selected by the professional team, regardless of the local skills and resources. Milne (1994) contends that SMME contractors face internal constraints that inhibit business success. These include a lack of technical skills and deficiencies in numeric, literacy and managerial expertise. Milne (1994) was of the opinion that these can be overcome by training and advice.

Miles (1998), in a study on the proliferation of SMME contractors in South Africa, reported on a pressure group called the Black Construction Industry (BCI) which developed a set of proposals aimed at, amongst other things, improving the quality and level of involvement of SMME contractors. The BCI acknowledged that SMME contractors face a wide range of problems, including inadequate skills in business and project management, programming and managing the building process. Moreover, SMMEs had poor understanding of legal requirements and obligations, little access to finance, difficulties in assessing work and negative market forces. The BCI recommended the implementation of a support programme for SMME contractors aimed at eliminating such constraints on a long-term basis.

ILO (1987) regards deficiencies in planning and management skills as being probably the greatest single stumbling block among SMME contractors. Common examples of these deficiencies manifest in the inability to compile a material procurement schedule, include productivity checks during a contract, anticipate possible delays and plan transport requirements. SMME contractors clearly do not need the sophisticated management tools that large contractors commonly use. However, the need for planning techniques is critical at the SMME contractor's level, since profits are usually small and consequently margins for errors are small.

ILO (1987) reported that SMME contractors often have to contend with problems originating from the client (for example, incomplete drawings and specifications) because most clients assumptions made are that the contractor knows what to do. This often results in important cost information being left out of the tender document. In addition, inexperienced clients tend not to be pedantic about accuracy and quality of workmanship. Consequently SMME contractors often find that they have to do a costly remedial work when less expensive solutions could possibly have been utilised. This tendency presents a serious constraint to the development of a domestic contracting industry.

ILO (1987) observed that SMME contractors, especially in developing countries, are frequently experiencing problems when dealing with professionals. This is because professionals tend to expect higher levels of quality in the work and services from the contractor than what the contractor can actually deliver. Motlanthe (1990) agreed and

cited a situation where the architect designs and specifies some unfamiliar product to be used in the construction process. When the work is condemned, it is the contractor that has to re-do the work as instructed by the architect in order to obtain the expected standard.

Fraser (1989) agreed with the observation by ILO (1987), citing a similar problem can also be experienced when the contractor is required by the structural engineer to reconstruct a foundation to the required strength. The electrical engineers also impose such demands on the SMME contractors when commissioning electrical work. The engineer detects some faulty work, there is a tendency to ask for the work to be re-done in order to comply with the required standard. All this can lead to delays and the contractor might find it difficult to get an extension of time. The client might also find problems with the overall relationship due to the contractor defaulting on the agreed contract. If, for instance, the client does not make payments within the agreed period the contractor might blame it on the consultants who are responsible for promptly notifying the client about the payment issues. Sometimes there might be disagreements with the valuation of work in progress. In such instances the quantity surveyor has to physically re-measure the work done on site to reach agreement on the quantity of work to be certified.

ILO (1987) noted that in developing countries, contractors are criticised for their tendency to produce poor quality work, failure to meet deadlines, inability to undertake remedial work and not meeting completion on time. Motlanthe (1990) observed that this is a matter of concern to most contractors because they tend to think that they are reasonably competent contractors hence professionals often expect more than what SMME contractors can deliver. According to Cattell (1993), the ability of an individual to market themselves, as well as their firm, was found to be another common factor of success. This involved obtaining a loan, securing sites, attracting clients or establishing material credit lines. Such obstacles may be overcome through the ability to present oneself professionally and confidently.

In a newspaper article Mnelemba (2006:4) reported that a Malawi Congress Party (MCP) member of parliament accused the National Roads Authority (NRA) and Lilongwe City Assembly (LCA) of engaging sub-standard contractors to construct and

repair roads in townships. The Member of Parliament (MP), a *Mr Kadzamira*, said that once roads are repaired, they do not last long before potholes requiring further repair emerge. *Kadzamira* told the newspaper that most of the roads in his constituency were in very poor and impassable condition. *“Much as I commend the good job NRA is doing in rehabilitating location and feeder roads, I feel that the SMME contractors that are employed are not qualified to do such kind of work. The area 25 Msungwi Ring Road, among other roads, was repaired in October 2008 but by January 2009 it was full of potholes Mnelemba (2006:4).”*

Kalimba (2007) observed that the building regulations for the Blantyre City Assembly were disjointed, archaic and obsolete because they were based on United Kingdom standards. A review was required in order to ensure that clear performance standards were set. These should be easy to understand and reflect society’s expectations of homes and buildings that would promote safety, health, well-being and sustainability. Speaking at the same consultative workshop, Minister of Local Government, Dr George Chaponda said the review was important as it would take into account several developments taking place, such as the use of materials and matters related to the environment which were previously not addressed. The minister went on to say that many buildings constructed in the cities were substandard or failed to address environmental matters and safety concerns of modern buildings.

Khunga (2008:6) reported that when the Deputy Minister of Transport, Public Works and Housing, Gift Mwamondwe opened the Third Transportation Technology Conference, in Mangochi, Malawi two issues arose: firstly, the government accused local contractors of lacking capacity to successfully carry out road projects and secondly, local contractors saw it unfair for government to generalise the weakness in the industry. Contractors also thought the problem was with those who awarded the contracts because they politicise the exercise. There is, certainly, truth in both arguments. Everyone who travels on the roads in the cities have seen permanent potholes at particular places which are filled by contractors today and look like a board of the “Bawo” game a week later. But what contractors are saying is also true that government should assess the capacity and track record of the contractors before awarding contracts. *“Surely there are basic requirements for a firm to be given a*

contract and these are the indicators of whether a bidder can successfully complete a given job or not.”

Muhariwa (2007:7) reported that contractors in Malawi need to earn credibility from organisations that give them contracts through completion of projects in the shortest period possible without compromising on quality. Plan Malawi (A non-governmental organisation) country director, Lilian Okwiry said that *“most contractors in the country take long time to complete a single job and their quality of completed work is usually below standard.”* The director said this when she presided over the handing-over of a MK3 million Kwacha school block at Ntuwakale, where the contractor took only two months to complete the job. *“This school block is a demonstration of how contractors should be working in the shortest period of time, but with brilliant results. This contractor did not compromise on quality in spite of being fast and efficient. Plan Malawi has had other contractors who failed to produce the same results in two years and if you go and see the school blocks they built, you will not believe that it took them all that time* Muhariwa (2007:7).”

A report of contractor development undertaken by the Tanzania Civil Engineering Contractors Association (TACECA, 2003) noted that current business conditions in Tanzania do not favour the participation of SMME contractors in the country. For example, local contractors are usually not paid the same rate as foreign contractors and there is, understandably, little support at present from these foreign contractors in developing local contractor capacity. The situation is aggravated by limited access to dependable construction equipment and working capital. Furthermore, information on project opportunities reach local contractors at a very late stage in the procurement process and sectors of the local community, notably women contractors, have had extreme difficulty in participating in even the smallest of construction opportunities. Due to bureaucratic and budgetary constraints, the government has thus far been unable to provide a sustainable environment of continuous work flow for the SMME contractors. The problem is worsened by an inefficient payment process in which payment is delayed for months and this is seen as normal.

Newspapers in Tanzania are awash with articles complaining about the deficiencies in managing contracts: Obed (2000) reported deficiencies in contracting and managing contracts due to:

- Lack of technical skills;
- Lack of experience in preparation of tender documents;
- Poor site organisation;
- Poor construction practice;
- Many variation orders;
- Poor equipment; and
- Poor project management.

This was revealed by a regional engineer speaking at the inauguration of the TACECA. Other problems mentioned included delayed payment to SMME contractors, poor workmanship, corruption and consultants favouring some contractors. Haonga (2000:7) writes that *“It is saddening to note that more than 95 percent of the contracting work in Tanzania is carried out by foreign contractors.”*

In a related article (Haonga 2000a:3) reported that contractors were urged to follow codes of conduct and ethics in carrying out their businesses. *“I challenge all those contractors who, for some reason or the other, have constantly been doing unsatisfactory works in construction, maintenance and rehabilitation of our roads, bridges, buildings and other public structures to work more diligently.”* The Permanent Secretary in the Ministry of Works went on to challenge the National Construction Council of Tanzania (NCCT) and consultants to make sure those incompetent contractors were not allowed to practise in Tanzania. Mkinga (2000) reported that the former president of Tanzania, Mr. Benjamin Mkapa, warned local entrepreneurs to build capacity since globalisation is offering new opportunities and also providing unprecedented challenges against which most contractors might not be able to compete with foreign firms.

A needs assessment carried out by TACECA (2003) identified the major constraints faced by SMME contractors in Tanzania. These are:

- Lack of capital;
- Lack of equipment;
- Inadequate training;
- Inadequate access to appropriate technology;

- Inadequate technical and business skills;
- Policy and advocacy issues; and
- Inadequate co-operation among stakeholders.

The National African Federation Chamber of Commerce (NAFCOC) in South Africa urged SMME contractors without capacity to start looking for partnerships and forming joint ventures so that they may compete effectively for municipal contracts. The NAFCOC president appealed to all members to prepare themselves for stiffer competition when tendering, and advised those who were successful in securing tenders to provide good service. The president further advised the Nelson Mandela Metropolitan Municipality to improve the payment systems to SMME contractors. There have been numerous complaints from this group about payments, loss of documentation and a host of other issues which result in SMME contractors not receiving their money on time, or not receiving it at all. Those who apply must also ensure that they are registered with the Trade Data Base. The president urged the SMME contractors to attend site meetings, follow correct tender procedures and submit their tender documentation on time (Matavire, 2007).

Matavire (2007:6) further reported that the NAFCOC president said that this would assist in ensuring the growth of the SMME contractor's sector and most of all, it would assist in ensuring that small businesses contribute positively to reducing unemployment. *"The municipality said last week that from now on it would award contracts, particularly housing construction contracts, to established contractors as the emerging ones are doing a shoddy job. The provision of a proper service is of a critical importance. Emerging firms must provide a good service when awarded jobs, particularly in projects relating to communities"*.

According to Cokayne (2007), in a report by the Construction Industry Development Board (CIDB) of South Africa, without an on-going supply of skills the industry would not be able to meet all of the country's long-term infrastructure development. This challenge has been exacerbated in recent times by the Gautrain infrastructure for the 2010 FIFA World Cup and the government's R372 billion infrastructure investment programme. If the projected growth in demand for skills in the building and engineering

sectors reach 10 percent a year over the next five years, there would be a demand for not less than 200 key management, supervisory and engineering staff.

The report by Cokayne (2007) comments on the skills strategy that is in place at the moment which requires significant changes in the current form of Further Education and Training to ensure that graduates, be they artisans, technicians or technologists, are able to meet world class standards. To restore the skills pipeline, the report recommended interventions by the education department to increase the number of mathematics and science graduates. It also recommends ongoing interventions by the Department of Public Works to improve the quality and relevance of current training programmes.

Rwelamila (2002) and Mashamba (2001) agreed that the SMME sector in the Southern African construction industry needs the support of the relevant industry stakeholders such as government, training and research organisations. According to Mashamba (2001), estimates show that foreign contractors and consultants hold 70 percent of the construction market in the Southern African Region. In many Southern African Countries, governments have expressed frustration at the poor returns on their investment in improvement programmes, for example, granting tendering preference to SMME contractors. As early as the 1960s, the forces of globalisation began to make their presence felt in Africa in the form of international financial institutions, mainly the World Bank and the International Monetary Fund. The arrival of these institutions in Southern Africa opened the gates for foreign contractors to operate in these countries.

Mashamba (2001) commented that many Zambian contractors have over time found it very difficult to take advantage of economic opportunities due to highly controversial participation schemes which do not favour local SMME contractors. A cursory look at the history of the Zambian construction economy during the 1960s and 1970s testifies to the fact that many African countries have a lengthy history of problems in their industry. The market share of Zambian contractors in road construction projects is a mere 17 percent; the rest is in the hands of foreign contractors. The Zambian experience highlights the critical role that government and other industry stakeholders should play in assisting contractor development.

Dlungwana and Rwelamila (2003) stated that much of the contractor development effort in South Africa and in other African countries focuses on providing work opportunities to as many contractors as possible, instead of assisting a limited number of contractors to build long-term sustainability. Much of this effort is also characterised by *ad hoc* development interventions that do not promote a culture of continuous improvement and long-term growth of contractors. However, some medium-sized and large construction enterprises in South Africa have been competing successfully in the global markets for some time. Within a period of less than ten years, these contractors have increased their share of external revenue from less than 10 percent to between 30-50 percent of their total revenue.

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.

Anonymous (2008) reported that the South African construction industry is dominated by a few large players, who account for as much as 75 percent of total output in the industry. The rest of the industry is rather fragmented. The country suffers from an acute shortage of skilled labour, limited access to power and inadequate financial and legal infrastructures. It was also observed that the industry is also excessively dependent on government contracts.

Kayanula and Quartey (2000) conducted research on the policy environment for promoting SMMEs in Ghana and Malawi, finding that SMMEs face a variety of barriers and constraints. They argued that factor availability and cost are the most common constraints faced. Constraints and barriers faced by the sector include:

- Lack of access to appropriate technology;

- The existence of entrepreneurial oppressive laws;
- Regulations and rules that impede the development of the sector;
- Weak institutional capacity; and
- Lack of management skills and training.

The National Construction Council of Zambia (NCCZ) 2003) and Uriyo *et al.*, (2004) observed that some foreign contractors, mostly from mainland China, often turn out to have insufficient experience and/or capacity. They tender for projects and are often, awarded contracts based on low prices with no relation to actual costs. In lean times medium-to-large contractors “down-plunge” to secure contracts which would normally not be of interest to them. Although they can hardly be expected to profit from such works due to their higher fixed costs in relation to the typical SMME contractor, they consider even partial cover of the overheads advantageous. This tendency damages the prospects and growth of the SMME contractors.

NCCZ (2003) and Uriyo *et al* (2004) stated that the so-called “brief-case” contractors, often with the “right connections”, but without proper training or commitment to invest in staff and equipment may register as a contractor and bid for works with the intention of hiring both staff and equipment on a needs-basis. More often than not, they may not even be committed to finishing the work, even after having been granted an advance payment. This tarnishes the image of the SMME contractor.

The National Audit Office Report (2001) and The Construction Task Force Report (1998) in Myers (2004) reported four sets of problems that the construction industry in the United Kingdom is facing. These are:

- The industry demonstrated a poor safety record and inability to recruit good staff;
- There appeared to be no real culture of learning from previous projects, and no organised career structure to develop supervisory and management grades;
- A concern was expressed about the poor level of research and development that restricted the industry’s ability to innovate; and
- Technology was not widely used across the construction industry.

2.3.3 Ethics in construction

Thompson, Strickland and Gamble (2008:318) define business ethics as “*the application of ethical principles and standards to business behaviour. Ethical principles in business are not different from ethical principles in general.*” According to the School of Ethical Relativism, “*different societal cultures and customs have divergent values and standards of right and wrong – what is ethical or unethical must be judged in the light of local customs and social morals and can vary from one culture or nation to another*”. According to the School of Universalism, “*the same standards of what’s ethical and what’s unethical resonate with peoples in most societies regardless of local traditions and cultural norms; hence, common ethical standards can be used to judge the conduct of personnel in companies operating in different societies, markets and cultural circumstances*”.

Ray, Hornibrook and Skitmore (2000:140) stated that “*the basic concern of ethics is the meaning and justification of utterances about the rightness and wrongdoing of the acts in particular: and/or means, the praise-worthiness of the acts themselves; ends, the positives or negatives or consequences to which they give rise to; and the character of the agents that perform them.*” In today’s construction industry, people working in the industry are affected by its moral climate but, at the same time, they mirror current societal morality in their behaviour (Ibid). For those working in the construction industry, much attention is concentrated on competitive tendering, a process whereby a sequence of promotion, pricing, product and distribution decisions take place; these are the contractor’s core marketing function (Ibid). The contractors need to market themselves and the pressures involved in winning the tender lead to the unethical practices. In this lies the value of studying the moral aspects of business behaviour. Ray *et al.* (2000) further said that an understanding of the ethics of tendering can help codify, and finally simplify, one aspect of the very complex support system of contract bidding in construction.

2.3.3.1 Collusion

The Concise Oxford Dictionary (1982:184) defines collusion as “*fraudulent secret understanding, especially between ostensible opponents.*” The Oxford Advanced Learner’s (2000:217) defines collusion as “*secret agreement in order to do something*

dishonest or to deceive people.” Ray *et al.* (2000) stated that collusion tendering is done when a number of firms that have been invited to tender agree between themselves either not to tender, or to tender in such a manner so that they are not competitive with the other tenders.

Myers (2004) defined collusion as when firms agree to co-operate to raise profit. According to anecdotal evidence from several groups of post graduate students working in the industry, collusion is common practice in contractual agreements across the whole breadth of construction. This conduct is in direct breach of the National Construction Industry of Malawi (NCICM) tendering code. It is seen to be a potential means of fixing, controlling, or maintaining prices that may have the effect of substantially lessening competition.

Ray *et al.* (2000) further cited the main reasons for this practice as being that it provides:

- An uneven distribution of work for all involved;
- A means of entering for what is apparently a bona fide bid; and
- A means for discussion and agreement over illicit profit making, such as amounts for covering secret fees or unsuccessful tenderer’s fees.

The possibilities for the practice of collusion therefore play a role in several other issues related to ethical tendering. The problem with collusion is that it is contrary to the principles of free competition. It benefits only the parties involved in the agreement but at the expense of those outside the agreement.

Goldstock (1990) and Shakantu (2003) identified four types of collusive bidding practices prevailing in the construction industry, especially for those amongst contractors who want to protect their existence:

- There is predatory bidding in which firms collusively agree to bid below prevailing market rates in order to drive out the competition. Once this is accomplished, the firms typically inflate the prices;
- There is what is known as “identical bidding”, in which firms agree not to bid competitively. This normally happens when there are very few contractors tendering or in selective procurement;

- Territorial bidding means that firms agree not to submit competitive bids in each other's territories this being established by geographical position of contractors or customer area; and
- Rotational bidding exists when firms agree to take turns in obtaining contracts through low bidding. This practice is usually concealed through the use of complementary inflated bids submitted by other members involved in the contractor's "club".

2.3.4 Prevalence of corruption and bribery in the construction industry

According to Van Der Walt, Cornelis and Samuel (1998), there are three reasons for the existence of corruption and bribery. These include:

- Historical;
- Social; and
- Economic.

On historical and social grounds, they claim that human nature has fallen into greed and a selfish attitude of "me first," which has given rise to a culture of corruption and bribery.

For economic reasons, Van Der Walt *et al.* (1998:10) state that "*economic principles create a climate for corruption and bribery, the principles of exchange mean that people are paid for work they do.*" If wages are low people will be ready to earn extra money dishonestly to survive. Limited resources and practical shortages force people to pay bribes to obtain things. The Lack of an open market system means that a few in powerful positions can demand payment for necessary commodities.

Vee and Skitmore (2003) observed that to be termed "corrupt," an action must satisfy two conditions:

- Firstly, the recipient of the corrupting object or device must consciously be disposed predictably to favour the interests of the benefactor; and
- Secondly, the corrupting object or device must be substantial enough to warrant reasonable worry that the recipient will favour the interest of the benefactor even when all else is equal.

Chiocha (2006) and Mita (2008) opined that the impact of corruption and fraud on the Malawi economy remains significant today. Every communication channel from print to electronic media, report something about corruption and fraud in the high offices of the land; from MPs down to the least important businessman. The reports are eye-catching and leave everybody wondering what happened to the moral fabric of society.

Chiocha (2006) and Matechak (2008) noted that corruption, bribery, fraud and extortion are not new phenomena, as these practices have existed for centuries. There are several factors that cause corruption. Certain practices are generated within time-based or locational political environments, others are caused by economic forces. Some are temporary and others are permanent. Shakantu (2003) stated that the construction industry depends on the strength of the country's economy. Economic growth is usually accompanied by a construction boom and *vice versa*. Notably, it is during periods of recession in the construction industry that corruption flourishes, possibly due to there being less work for contractors and intensified competition. As a result, contractors may do everything possible to obtain work in order to survive.

Chiocha (2006:12) reported that the construction industry has its own characteristic methods of project procurement which are different from other industries. Contractors obtain their work through open or selected tendering or by negotiation. These processes may also prove to be competitive insofar as contractors fear that their chances of being awarded a particular contract are almost zero. It is at this point that ideas of corrupting the tender-award/decision-making parties arise. *“Corruption inevitably results when individuals try to circumvent controls and regulations in order to take advantage of any loopholes inherent in their operating environments. Corruption flourishes in virtually all phases of the construction process and it is possible that participants at every level may engage in corrupt practice”*.

Chiocha (2009) citing Shakantu (2003) reported that it is difficult to quantify the impact of corruption on the cost of housing construction. Although certain corrupt practices such as bid-rigging clearly increase the cost, other corrupt practices may actually lower the cost of building projects. Arguably, certain corrupt practices exist precisely because they decrease the cost of navigating a bureaucracy, complying with regulations.

A recent article (Anonymous 2009) stated that the *Transparency International* revealed that during the previous years, Malawi slipped 28 steps down the line on its *Corruption Perception Index*. Although the Malawi Government trashed the report, describing it as unrealistic, basic knowledge tells us that over the years corruption has progressively become more rampant in the country.

Fellows, Langford, Newcombe and Urry (2002) stated that the construction industry is characterised by a large number of heterogeneous and fragmented firms engaged in intense competition. The industry is project based, with the majority of projects being designed and built for a price established through competitive bidding/tendering systems. Chiocha (2006:21) claims that *“it is possible at one point or another, within the confines of a construction project, some form of corruption such as extortion, bribery, theft, fraud, collusive bidding or rigging may occur. Professional advisors and consultants are normally the first port of call for clients of the construction industry. As such, Shakantu (2003) contends that they should also be the first line of defence against the corruption web. The industry ignores corruption at its own peril.”*

CIDB (2008) stated that the “Register of Contractors” was established as a risk mitigating instrument to assist public sector clients to select capable contractors to deliver public infrastructure. The Register grades and categorises contractors according to their capability to carry out construction projects. Poor delivery and quality of work, as well as escalating costs of project failure, are part of the reasons for the government setting the “Register” in 2004. It effectively ensures who contractors who are awarded projects have the capability to deliver. According to a media statement posted on the CIDB (2009) website, the register gives an impression of corruption and bribery prevalence in the registration of contractors:

“In a tough stance against fraud and corruption, the Construction Industry Development Board (CIDB) has suspended a number of unscrupulous contractors from its register since the start of its anti-corruption campaign last year. The suspensions effectively bar corrupt contractors from receiving government tenders for construction. Government departments, municipalities and public entities may not award tenders to contractors that are not registered with the CIDB, according to the CIDB Act 38 of 2000 and the Construction Industry Regulations of 2004.

Unscrupulous contractors are increasingly resorting to bribery, fraud and corruption to bypass CIDB requirements for registration, especially in higher grades, in a bid to land bigger construction projects from government. Taking a tough stance the CIDB CEO Ronnie Khoza said that the CIDB cannot allow a situation where a few individuals threaten to undermine the integrity of the Register of Contractors through unlawful acts. No government department, municipality or public entity may award a construction tender to a suspended contractor.”

The statement goes on to say that at least two CIDB employees have been imprisoned and dismissed for accepting bribes and others are being investigated. The CIDB has established an anonymous fraud reporting hotline, 0800 112 452, through which staff and the public can report suspected fraud and corruption. The hotline is managed independently by external experts. Independent investigators have also been appointed to follow up reported incidents of fraud to enable the CIDB Board to conduct hearings and issue penalties to offenders. *“We want to send a strong message to contractors that fraud will not be tolerated and to deter those that may be tempted. In addition the CIDB is also handing down fines to offenders,”* Khoza concluded.

In a bid to control corrupt practices the CIDB (2009) reported of cases where six contractors were involved in corrupt practices. The corrupt practices involved in, included presentation of fraudulent accounts, bribing a CIDB official to aid contractors in registration and using CIDB logo without authority. These contractors were suspended from being members of the CIDB for a period ranging from 6 months to 24 months depending on the degree of the offence. This meant that these contractors could not be awarded contracts within the suspended period.

2.3.5 Constraints in project funding – financing and growth

Carson (2006) found out that SMME contractors working on labour-based projects often have limited access to formal financing services. Operating in a country where interest rate ceilings and collateral generate a gap between small businesses and banks, SMME contractors are bound to rely on informal and ad-hoc types of financial

services. Within any developing country, skills transfer initiatives do not occur in a vacuum. The business environment has a key role to play in the development of the transport sector. The legal framework and policies around investment and bank lending are fundamental. Liberalised policies by banks and other financial institutions will only result from effective communication between the sector, government and the banking community.

According to Carson (2006), difficulties that SMME contractors have in attracting finance strongly affect the performance of their work. They lead to a variety of sub-optimal situations where construction operators delay construction, work with the wrong type of equipment and sometimes pull out because of sudden financial problems. SMME contractors tendering for construction contracts mostly use their own funds and family savings to invest in equipment. A large share of financial resources used for procurement comes from non-construction activity such as transport and trade. In a situation where an entrepreneur has insufficient funds to purchase new equipment, the contractor will obtain second-hand machinery and trucks on the local market.

Carson (2006) observed that supplier credit seems to be the most common source of external financing for equipment among SMME contractors. Competition on the supplier market defines whether equipment vendors sell on credit and what they charge in terms of down payment and interest. In many rural areas, the demand for rentals exceeds supply, making it difficult for SMME contractors to rent appropriate and well maintained equipment. It is thus vital to briefly discuss the financing of the projects in some selected developing countries. Mahommed (2005) agreed with the earlier observation that contractors face difficulties in financing construction projects due to financial problems; delay in progress payment, no advance payment and cash-flow problems.

Shakantu and Kajimo-Shakantu (2007a) reported that efforts to promote SMME access to finance might have more impact on development and growth, but access is limited and cost of capital is high. While the South African Government has made some efforts to increase accessibility to finances, the targeted programmes have had limited success because awareness and usage of existing promotional programmes are very low. In addition to insufficient access, high interest rates also pose a constraint to micro

enterprise growth. Moreover, Gounden (2000) reported in Shakantu and Kajimo-Shakantu (2007) that there are core difficulties seen in terms of discrimination by financial institutions against micro enterprises with little collateral, difficulties in accessing information and lack of market exposure. Nissanke (2001) observed that the inadequacy of external finance at the critical growth/transformation stage of micro enterprises deters growth potential and expansion.

Kayanula and Quartey (2000:13) found access to finance remained a dominant constraint to small scale enterprises in Ghana and Malawi. “*Credit constraints pertaining to working capital and raw materials were cited by respondents*” (between 24 percent and 52 percent in (Parker, Riopelle and Steel 1995). Aryeetey, Baah-Nuakoh, Duggleby, Hettige and Steel (1994) reported that “*38 percent of the SMMEs surveyed mention credit as a constraint. In the case of Malawi, it accounted for 17.5 percent of the total sample*” (Daniels and Ngwira 1993:30-31). This stems from the fact that SMMEs have limited access to capital markets, partly because of the perception of:

- Higher risk;
- Informational barriers; and
- The higher costs of intermediation for smaller firms.

As a result, SMMEs often cannot obtain long-term finance in the form of debt and equity.

ILO (1987) identified access to finance as the major problem to SMME contractors, mainly due to their inability to fulfil collateral requirements. Fraser (1989) agreed with the observation that African black SMME contractors are regarded as falling into the high-risk category. Motlanthe (1990) argued that the consequences of limited access to finance tend to have a detrimental effect on the reputation of SMME contractors, who often resort to taking deposits for new contracts as a means of financing their current work. This tendency is partly a reaction to the contractual conditions governing payments, which often present great difficulties for SMME contractors. Khumalo’s (1994) research revealed that even technically competent builders faced obstacles to success. The biggest constraints were difficulty with finance from reluctant financial institutions, which generally classify them as high-risk clients regardless of their capabilities (Uriyo, *et al.*, 2004).

Khoza (2008) opined that the high risk nature of construction, as well as perceptions of banking institutions that emerging enterprises are a high credit risk, means that it is very difficult for contractors to access finance. In desperation, many contractors turn to “cession” agreements, which have a negative impact on their track record and CIDB grading.

2.3.6 Lack of work opportunities and limited new opportunities

It was identified by Materu (2002) in Tanzania that work is not “packaged” to promote SMME contractors. Furthermore, in many cases open invitations are issued to all registered contractors, even in the case of minor works that could be executed by SMME contractors. This does not allow for fair participation, as big, medium, small and emerging contractors are pitted together. The representatives from the National Association of Small Scale Contractors (NASSC) expressed concern over the lack of appropriate work opportunities. There are not enough projects on an ongoing basis to ensure commercial viability of contractors. This causes problems such as the underutilisation of equipment and difficulty in retaining good staff members. Direct contracts with government and donors are not forthcoming on a continuous basis and there is a perceived lack of policy aimed at promoting the engagement of SMME contractors as sub-contractors on larger projects.

Shakantu and Kajimo-Shakantu (2007a:4) in South Africa citing CIDB (2006), Rebelo (2005), and Cheetam and Mabuntana (2006) noted that *“there are large numbers of SMME contractors (survivalist and micro enterprises) entering at the lower end. 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 (job) creation and economic empowerment if this state of affairs persists. This could hamper the objective of the Accelerated Shared Growth Initiative for South Africa (ASGISA) to reduce unemployment by 50 percent by 2014. This currently remains the chief concern for South Africa and its economic planners. As it is, job creation currently eludes economic planners despite good economic growth. This is because the global entrepreneurship monitor (GEM), micro and survivalist enterprises are unlikely to create significant numbers of jobs”*. *“This inherent characteristic of micro and survivalist enterprises is why”* Von Broembsen (2005:4) *“proposed that the South African Government should shift its focus away from*

SMME programmes that support the redistribution of wealth or poverty alleviation towards programmes for entrepreneurs that create jobs”.

Rebelo (2005) observed that the industry has over the years seen a critical shortage of work for long spells at a time, with the result that employers were not in a position to retain excess labour, train or offer opportunities to young trainees.

2.3.7 Payment

Kapulula (2008), Uriyo, Mwila, Jensen (2004) and Buys (2006) found that SMME contractors suffer from erratic cash-flow problems and are often forced to delay or suspend works due to a delay in payment or non-payment, the government being the main defaulter in this respect. Contractors fail to meet their various obligations and works end up costing much more than the budget due to claims and interests. Cases have been cited where the government owes a single contractor money amounting to a total of MK25 million (Malawian Kwacha). In the case of the labour-based contractor, delayed payment inevitably leads to strikes, unrest and serious disruptions. The issue of delay in payments by the government was identified as a major stumbling block that has impeded the growth of contractor growth.

The Bolton Committee (2001:5) adds to the debate by reporting that a small business is vulnerable during a period of “credit squeeze,” when larger enterprises or government bodies could use their greater power to delay payment to small enterprises. The late payment problem is not confined to one country. “....we are told that it is often serious in Japan, for example, and that there the Ministry of International Trade has powers to intervene on behalf of the small firms with legitimate complaints of the delayed payment by large customers, and to enforce payment.” CIDB (2007) reported that the CIDB Construction Industry Indicators Summary Results Report, confirmed that profitability of contractors and payment procedures by clients has improved quite significantly. Notwithstanding this, there is still a disturbing trend that around 5 percent of payments were delayed by more than 90 days – which is in conflict with the CIDB Code of Conduct for all parties engaged in construction procurement.

Anderson (1987) and Kapulula (2008) examined the problem of late payment and suggested that the relationship between main contractor and consultants is determined

by the Master Builders Association standard contracts. The practical implementation of the relationship shows that payment is the primary stumbling block to peaceful co-existence within the industry. Quantity Surveyors do not perform evaluations on time. This may mean that the contractor receives payment for completed later than the expected date.

Motlanthe (1990) stated that in addition to the complaint that the initial “tender price” is often fixed by the client or Principal Agent, it is common that fairly long delays occur between the time that work is certified as completed and the time that cash is received, particularly in the case of public sector clients. Motlanthe further argues that many contractors complained of the problems in their subsequent financial relationship between the contractor and the sub-contractor. Buys (2006) agrees with the argument. Examples of these are given in Krafchik’s (1991) study. They include undue delays in payment, retention monies not being refunded and excessive penalties often being inflicted for absurd reasons.

2.3.8 Budget allocation

NCCZ (2003), Uriyo *et al.* (2004), and Kapulula (2008) observed that the experience and perception is that government, the largest employer of SMME contractors, will often for political reasons advertise tenders and even enter into contracts without having adequate financial budgets in place. The consequence is that payments are either delayed or simply not forthcoming. This frustrates and destabilises the already cash-strapped contractors, especially those who have already mobilised and are on site. Another related problem concerning budgets, as perceived by contractors, is that there appears to be insufficient experience/knowledge among the client institutions or consultants when it comes to preparing realistic budgets for works.

2.3.9 Credit management

Late interim payments have been a problem for decades now. Bates (2001:58) found from a 1954 Oxford Survey that creditors and debtors exceeded 50 percent of net assets of contractors. For SMMEs, the figures are 23.2 percent for creditors and 35.3 percent for debtors, compared to 18.6 percent and 24.2 percent respectively, from public companies. In comparison, Wilson (1996: 10) reported from their 1994 survey that *“on average it was found that 52 percent of all invoices were actually paid later*

than the due date and 44 percent of companies reported that such payments caused them significant problems.” The West of England Engineering Manufacturer Association made a statement about “extended credit by delaying payments of its bills to emerging business.” This position was summed up in the following manner: “The typical SMME contractor is now facing a situation in which large customers are taking extended credit at a time when his own bank manager is compelled to refuse normal bank facilities.” Bates (2001) and Wilson (1996) stated that credit often fills the finance gap, particularly for the smaller business that finds itself with limited access to loans as they are seen as high risk customers.

Howorth and Wilson (1999:23) noted that the standard management of credit in Malawi amongst SMME contractors is very poor. Some of the reasons for SMME contractors’ failures have been the result of poor or careless financial management. Howorth and Wilson credited the Society of Practitioners of Insolvency who said: “Unsecured nature of most trade credit management generates corporate exposure to the delinquency risks of slow payments and debt fault. This is compounded when many businesses operate on the Principle of ‘pay when paid’ thus exacerbating the late payment problem.”

According to Broadmore (2006), where any form of payment is involved there is fear on the part of the paying party that there may be overpayment, followed closely by insolvency of the party who has received payment. Whilst SMME contractors may suffer because their debtors do not pay, they may benefit because they make late payments to their own suppliers. The Bolton Committee (2001:3) claimed that “many firms grant credit in a haphazard fashion and have slow and irregular collection of debts.” They go further by stating that emerging businesses “on occasion neglect for weeks on end to submit bills for work completed or goods delivered and fail to take advantage of discounts for prompt payment of accounts thus failing to appreciate the effect by paying a very high rate of interest for the credit they are taking.” Continuing the argument from the perspective of emerging SMME contractors in the United Kingdom that this is still happening today, Wilson (1996) argued that suppliers have no efficient invoicing system, nor do they check credit worthiness of the clients. This can be seen in their lack of clearly established and agreed-upon credit terms prior to sales in order to monitor payment patterns.

McMahon (1996) reported that problems regarding payment by debtors originate not only from bad practice by debtors, but also reflect poor credit management on the part of the business which is extending the credit. Phillips (1999:4), a senior manager at Ernst and Young, states that *“rather than paying attention to credit management only when confronted by a major bad debt, organisations must recognise that credit risk management warrants the attention paid to any other area of operations.”* Howorth and Wilson (1999) found from their case studies that, for two totally different reasons, some SMME contractors are more sensitive to credit management than others. They also found that sensitivity to late payment was reduced in businesses with clear planned long-term financial cash flow to be planned. When good credit-management procedures exist, the actual late payment was less.

Wilson (1996) found that 76 percent of respondents from a Forum of Private Businesses (FPB) reported good credit-management practices and credit terms with their SMME contractors and ranked their importance as follows:

- 43 percent had a formal credit policy;
- 41 percent had a credit application form;
- 65 percent checked the credit worthiness of customers before allowing credit;
- 28 percent used credit reference information (19 percent on line);
- 39 percent categorise customers according to solvency risk; and
- 58 percent categorise customers according to late payment risk.

Chittenden, Poutziouris and Michealas (1998:6) found that 62 percent of respondents in their research subscribed to a credit agency to obtain information about potential customers, with only 58 percent requiring applications to be completed on new customers. Some of the results indicate that poor credit-screening practices exist in small businesses, especially when the comment was made that *“We give credit to anybody who asks for it. It is as simple as that.”* To add to the problem, they found that on average, only 45 percent of SMME contractors have full-time credit officers.

2.3.10 Legal constraints in micro-enterprise development and growth

Shakantu and Kajimo-Shakantu (2007:5) cited Bhorat *et al.* (2002) and Uriyo *et al.* (2004) in stating that, with regard to legal barriers, a commonly perceived constraint of micro enterprises is the labour and taxation laws which are said to raise the cost of

employment, artificially prolong retrenchments or corrective action and do not allow for adequate flexibility, especially in wage settings and the arrangement of working time. As a result, enterprises feel a profit squeeze and this impact on the willingness to create jobs. Some of the South African Government Acts and their perceived negative impacts are given below:

- *“The Labour Relations Act (LRA): Act 66 of 1995”*

Shakantu and Kajimo-Shakantu (2007) cite Kesper (2000) who posited that the LRA outlines rights and frameworks for collective bargaining and dispute resolution. Enterprises complain about the bargaining Council’s failure to incorporate their interests and about the cumbersome dispute resolution procedures.

- *“The Basic Conditions of Employment Act (BCEA): Act 75 of 1997”*

Bhorat *et al.* (2002) cited by Shakantu and Kajimo-Shakantu (2007) state that the BCEA lays down basic working conditions of workers in enterprises. Micro enterprise owner managers indicate that wage levels and maternity leave entitlements inhibit employment of young women and unskilled labour entrants.

- *“The Employment Equity Act (EEA): Act 55 of 1998”*

Shakantu and Kajimo-shakantu (2007) cite Bhorat *et al.* (2002), stating that the EEA aims to prevent unfair discrimination by employers. Enterprises have problems identifying equitable representation in all occupational assignments. Moreover, it is difficult and expensive to source highly skilled candidates from some designated groups.

Kayanula and Quartey (2000) reported that *“.....high start-up costs for firms, including licensing and registration requirements can impose excessive and unnecessary burdens on SMME. The high cost of settling legal claims and excessive delays in court proceedings adversely affect SMME operations.”* Makoza and Makoko (1998) are of the opinion that in Malawi, *“prohibitive laws like The Business Licensing Act No 15 of 1979, The Electricity Act No. 6 of 1996, The Control of Goods Act No. 14 of 1979, and The Export Incentives Act No. 5 of 1978 have severely constrained SMME development.”* Daniels and Ngwira (1993) state that 5.3 percent of proprietors in Malawi mentioned this as a constraint. In the case of Ghana, the cumbersome procedure for registering and commencing business was a key issue often cited. However, Aryeetey *et al.* (1994) found that this accounted for less than 1 percent of

their sample. Meanwhile, the absence of antitrust legislation favours larger firms, while the lack of protection for property rights limits SMME access to foreign technologies.

2.3.11 High cost of tenders

According to Shakantu (2003), tendering can prove to be costly, especially in a small-scale building contractor's organisation 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.

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

2.3.12 Guarantees or sureties, insurance bonds, performance bonds etc

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 SMME contractors. The summary below tells it all:

“We have found that the involvement of SMME 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.” Lazarus (2005) reported that the contractor's financing scheme, “Fundisa”, included a maximum of R3 million in project finance and

R3 million in performance guarantees per contractor. This becomes a barrier as SMME contractors are unable to raise R3 million as a performance guarantee.

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, micro enterprises are forced to obtain their performance bonds at significantly higher rates than well established enterprises. Even the reduction of the bond amount to between 2.5 percent and 10 percent depending on the risk classification of a contract, has not significantly reduced this problem in South Africa.

2.3.13 Equipment and technology

Kayanula and Quartey (2000:14) cited difficulties in gaining access to appropriate technologies and information on available techniques. It is believed that this limits innovation and SMME competitiveness. Besides that, other constraints include capital and labour, as well as uncertainty surrounding new technologies. It is stated that 18 percent of the sampled firms in Aryeetey *et al.* (1994) “*mentioned old equipment as one of the four most significant constraints to expansion*”. This is in contrast to the 3.4 percent reported in Malawi (Daniels and Ngwira, 1993) and 18.2 percent as reported by Parker *et al.* (1995) as cited by Kayanula and Quartey (2000).

Shawa (2008:1) noted that “*NCICM appreciates 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 SMME contractors cannot afford.*” Motlanthe (1990) further argued that the SMME contractors 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 utilise manual, rather than mechanical methods of building QS might be due to SMME contractors inability to access the required equipment. It also depends on whether its productivity would improve sufficiently to justify the expense. 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.

2.3.14 Domestic demand and unsteady work-flow

Research by Kayanula and Quartey (2000) drew the conclusion that 24.9 percent of Malawian proprietors had marketing constraints. In contrast 5 percent of respondents was quoted in the Ghanaian study (Aryeetey *et al.*, 1994, and Daniels and Ngwira, 1993). The business environment varied markedly among SMMEs in Ghana and Malawi, reflecting different demand constraints after adjustment. There were varying levels of uncertainty caused by macro economic instability and different levels of government commitment to private sector development.

Kayanula and Quartey (2000) argued that recent economic policies have led to a decline in the role of the state in productive activity, while renewed private investment has created new opportunities for SMMEs. Nonetheless, limited access to public contracts and subcontracts arising from cumbersome bidding procedures and/or lack of information, inhibit SMME participation in these markets. Parker *et al.* (1995) cited in Kayanula and Quartey (2000), and Uriyo *et al.* (2004) posited that demand constraints limited the growth of SMMEs in Ghana.

Cattell (1993) and Uriyo *et al.* (2004) stated that SMME contractors tend to experience perpetual difficulty in obtaining work on a steady basis. Indeed, so do larger contractors, but SMME contractors are particularly vulnerable to demand fluctuations. Furthermore, the absence of national policies on the allocation of work for SMME contractors tends to exacerbate the case. Public work is usually issued on a pre-qualification system, which categorises and restricts contractors to maximum projects that they are permitted to undertake.

2.3.15 Managerial constraints - lack of entrepreneurial and business management skills

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 SMME development. Even though SMMEs 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 SMME effort to improve their management because consulting firms are often not equipped with appropriate cost

effective management solutions for SMMEs. Furthermore, absence of information and/or time to take advantage of existing services result in weak demand for them.

One universal problem facing SMME contractors Ramokolo and Smallwood (2008), and (Anonymous, 1997) cited in Chilipunde (2007) is the inability to estimate cost, compile tenders and assess the effects of inflation; this clearly reflects the lack of training and experience in business and financial management. In the absence of this experience, SMME contractors tend to rely on intuition based on previous experience. They also overestimate labour productivity and material transport costs. These vary from one contract to another. Fraser (1989:5) gives an overview of the situation:

“The lack of costing skills has led to the under-pricing of contracts. An African Builder also faces heavy financial losses at the end of the project by virtue of the fact that he fails to incorporate costs associated with the overheads and contingencies in compiling and quoting for tenders. What most African contractors do, and are very confident of, is the use of the standard rate per m² as a means of estimating. This is reinforced by the popular census as to what constitutes an acceptable township rate and the willingness of the competitors to undercut any contractor who tries to increase his rate. This method of pricing leads to most contractors ending-up with under-pricing, since they tend to use the same rate in all their projects, irrespective of the finishes, structure, allocation of resources and the nature of the foundations. To mention the worst part, “township rates” in some cases have remained unchanged for the past five years, irrespective of inflation prevailing today and the real value of the Rand in the economy.”

Krafchik (1991) advocated that the apparent lack of understanding of inflation and the escalation in the cost of building material clearly present an imposing barrier to black SMME contractors wishing to compete in the formal home-building market. Building societies in South Africa are reluctant to allow their home-buying clients from increasing original agreed costs. However, this essentially forces the contractors to estimate price increases in advance and include in an amount for this in their tender. Griffin (1990) clarifies this and suggests that it means that, the contractor would have to assess and cover the risk of price increases. Merrifield (1992) noted that black SMME contractors are generally unable to manage business risks.

El-tr and Kagari (1994) proposed a framework for monitoring the development of SMME contractors in Atlanta and deduced that many people started constructing business without construction education background, market experience or managerial talent needed to run a construction operation. Some of the skills badly needed are:

- Estimating knowledge;
- Ability to read drawings and specifications;
- Ability to schedule construction activities; and
- Proper accounting/book-keeping skills essential to keep track of the job and performance cost and profit.

Ramokolo and Smallwood (2008) undertook an empirical study to assess the capacity of emerging civil engineering contractors in the Nelson Mandela Bay Metropole and found that SMME contractors lack the sophistication of large contractors. This is particularly evident in their inability to use the conditions of the contracts to their advantage. Clients almost invariably alter the basis of the original contract through variation orders and instructions. A thorough understanding of contracts is vital to the successful negotiation of rates for variation where considerable financial gains stand to be made. It is, however, frequently the case that SMME contractors lose money due to poor preparation and poor negotiation of claims against contract variations. SMME contractors tend to neglect book-keeping. Many see building as the firm's main objective and consequently they down-play the administrative aspects of running the business. Few of these contractors seem to recognise the positive role that accurate cash-flow, for example, could play in trying to raise working capital from the institutions. Krafchtik (1991) concurred by observing that this is also true for black SMME contractors because 50 percent had not kept records.

2.4 Training in the construction industry

Moss (2007) observed that training is a form of teaching or education that transfers knowledge. In the process, the trainer has certain responsibilities. The trainer must not only have exceptional communication skills so that learners understand the content of the training, but should be aware of the learners needs so as to be sensitive to their issues.

The trainer's role may include (Anonymous 2005:1)

- Presenting;

- Demonstrating;
- Guiding; and
- Administration.

The training sessions are designed ahead of time to ensure that the outcome of the intended training is achieved. According to Anonymous (2005:1) components of training design should include:

- *Time;*
- *Activity being taught;*
- *Activity link to specific objectives;*
- *Resources and materials needed for activity, and*
- *How learning skills will be assessed.*

Various programmes have been put in place to enhance basic literacy and life skills in construction through training being conducted by NCICM. SMME contractors can benefit greatly through participation in these programmes, since they are designed to address the contractor's shortfalls.

The purpose and the rationale of the qualification is explained as follows (SAQA 2007:1): *“Qualifying learners are able to start and manage their own construction contracting business. In addition, the qualifying learner will demonstrate competence in 1 of the 3 areas of specialisation. The qualified learner is able to competently fulfil SMME construction contracts safely and in a professional manner, to ensure that industry standards are maintained.”*

SAQA (2007) believes that this qualification has been developed to assist with standardisation across the construction industry. This will allow one to register as a construction contractor and lay a foundation for future career advancement across similar SMME programmes in other sectors, as well as to access supervisory and management qualifications within the construction sector. As a result of past legacies, many practitioners within the construction industry were denied career advancement and possible recognition as qualified contractors.

According to SAQA (2007), and Ramokolo and Smallwood (2008), poor educational opportunities at some schools deprived them of entry to formal training institutions. The introduction of a National Certificate in Construction Contracting, based on unit

standards, will allow learners to reach their full potential for advancement. Formal education will no longer be a barrier and now allow for the recognition of prior learning. The Sector Skills Plan developed by the Training Authority (CETA) displayed a definite need for entrepreneurial and management personnel in the SMME. Once training needs have been addressed then mentoring can be implemented in conjunction with the CETA.

According to Shawa (2008), the current chairperson of NCICM reported that it has put in place a number of training programmes to run throughout the 2008/2009 financial year. These courses have been carefully designed following the Training Needs Assessment and Training Impact Assessment Survey, which NCICM conducted between April and June 2008. Contractors and members of the construction industry evaluated whether the training NCICM conducts has made any impact on the industry and the training gaps that the construction industry is facing.

CIDB (2008b) addressed the challenge of skills development through its Construction Industry Performance Unit and the National Contractor Development Programme. There is an indisputable link between the quality of projects delivered by contractors and skills. *Pertunia Mahlaka* (one of the CIDB concrete women) believes that formal education and skills development is the key to a better construction industry in South Africa. This view is shared by most women contractors who spoke to the CIDB.

Kayanula and Quartey (2000:15) observed that “...*despite the numerous institutions providing training and advisory services, there is still a skills gap in the SMME sector as a whole.*” According to Daniels and Ngwira (1993), about 88 percent of Malawian SMMEs desired training in various skills but as of 1992, less than 6 percent have actually received it. In Ghana, a lot has actually been achieved in this regard, though there is still room for improvement.

2.5 Targeted procurement – SMME contractors

CIDB (2008) reported that the Department of Public Works (DPW) has come up with a number of initiatives to help small and women contractors. It has directed public procurement towards the empowerment of historically marginalised groups and the creation of productive employment. Through its existing contractor development

programmes, the Department supports and empowers women-owned construction enterprises. Since the inception of the procurement reform process in 1995, it has been actively involved in conceptualising and implementing programmes to promote SMME contractors in the built environment. These programmes include targeted procurement and the emerging contractor development programme (ECDP). The Contractor Incubator Programme (CIP) was initiated in 2004 by the Department as part of the ECDP. The CIP targets contracting enterprises within categories three to seven on the CIDB grading. This enables these enterprises to be eligible to tender on contracts between R1.5 million and R30 million. A total of 136 SMME contractors are currently registered on the CIP and 62 of these are women-owned contractors. This translates into 46 percent of registered contractors.

Shakantu and Kajimo-Shakantu (2007) noted that efforts to promote SMME contractors through targeted programmes such as the preferential/affirmative procurement policies have had some limited success. There is need for improving the effectiveness of the programmes. DTI (2006) claims that it is possible to harness the potential of SMME contractors to improve construction competitiveness and infrastructure delivery, in addition to creating jobs and alleviation of poverty through smart production processes.

2.6 Institutional constraints - associations and collective action

The World Bank (1992) stated that the lack of cohesiveness and the wide range of SMME interests limit their capacity to defend their collective interests and their effective participation in civil society. Associations providing a voice for the interests of SMMEs in the policy-making process have had a limited role compared to those of larger firms. Many of the entrepreneur associations have yet to complete the transition of their goals from protectionism to competitiveness.

2.7 Institutions

The government of Malawi recognises the important role the sector plays in the national economy and has established a number of institutions to support the activities of the sector. The institutions are categorised as parastatals and state owned enterprises. The support institutions provide entrepreneurship training, laws and regulations, business advisory services, market information, registration and appropriate technologies.

2.7.1 National Roads Authority – Road Fund Administration.

In a recent article Simutowe (2008) stated that the Malawi government had dissolved the National Roads Authority and established the Roads Authority and Road Fund Administration. The two organisations were established by act No. 3 of 2006, and started to operate in 2007 to improve efficiency, accountability and provide checks and balances. The Roads Authority (RA) manages road networks, construction, maintenance and rehabilitating projects while Road Fund Administration (RFA) sources finance for all road projects, ensuring that funds are utilised and managed properly.

The Road Fund Administration was set up under the Road Fund Administration Act No. 3 of 2006 as stated earlier on with principal purposes, according to Section 19 are:

- The maintenance and rehabilitation of public roads; surveying and monitoring of rehabilitation of public roads;
- On a cost sharing basis, to conduct routine and periodic maintenance of roads, tracks and trails under the responsibility of a city, town, municipality or district assembly, as the case maybe; and
- To conduct emergency works on public roads; which is provided for in the annual budget of the Roads Fund Administration.

2.7.2 The national construction industry council of Malawi (NCICM)

The National Construction Industry Council of Malawi was established by the National Construction Industry Act No. 19 of 1996. It was established to help promote and develop the construction industry in Malawi in terms of the registration and coordination of training for persons engaged in the construction industry. Functions of the NCICM are to:

- Promote and develop the construction industry;
- Facilitate access to resources for local firms;
- Promote research, development, and local materials;
- Promote safety standards;
- Prescribe and vary the categories for contractor registration;
- Recommend conditions under which foreign firms can register;
- Conduct training and coordinate training done by others;
- Make available information, advice and assistance;
- Publish technical and commercial information;

- Review the process of awarding contracts;
- Monitor and evaluate the industry;
- Exercise disciplinary control;
- Standardize quality control, contract documentation and procurement process;
- Provide advisory services and technical assistance to the industry;
- Advise government on matters pertaining to developing the constructing industry;
- Monitor construction costs, participate in or make arrangements for conferences and seminars;
- Assessing the performance of contractors and maintain records;
- Provide data on the size and distribution of contractors; and
- Provide the construction of low-cost housing

A key feature of all NCCs is that they are effective public-private partnerships, creating a forum in which industry problems can be raised and addressed.

2.7.2.1 Impact to date

NCICM (2004) stated that one indicator of success registered by the establishment of an NCICM would be the increased number of SMME contractors that have registered so far. If nothing else, the supply of trained contractors and the number of contractors on training programmes has certainly increased.

NCICM (2004) further stated that the organisation is able to generate income through several activities it carries out, including from registration and yearly subscription fees. It is perhaps more sustainable, especially when the NCICM is able to charge participants for participation in training programmes. There is an increasing awareness of the role that employment generation through contracting in the building and road sector can play in poverty reduction in Sub-Sahara African countries. Progress in the development of SMME contractors has lagged behind other elements of the reform programme. Business opportunities created by the higher volume and value of road maintenance and construction contracts through the reform process are being captured disproportionately by international firms.

NCICM (2000) reported that the NCICM has managed to acquire a pool of graders that are superior to what has been available before in the government plant pool. The

service should, however, be contracted out to a private equipment-lease company in due course. The impact of advisory services has been limited. In Malawi, for instance, an attempt was made to develop new, standard bidding documents for small-scale contracts, simpler documents were needed as most directors of SMME contractors are laymen in construction. However, these were never adopted.

2.7.2.1 Common constraints facing SMMEs - NCICM

Contractors in Malawi, like many of their counterparts in other developing countries, are faced with a number of constraints and challenges that affect their growth. A seminar organised in 1997 on “Challenges and Opportunities in the Construction Industry in Malawi” identified ten issues which impact adversely on the performance of SMME contractors (Nyasulu, 2000). Among them, the following were considered to be critical:

- A low share in work opportunities (10 percent for civil works contractors);
- Poor quality of services and products;
- The lack of a policy on the construction industry;
- Inadequate commitment, particularly from professional constituencies, in addressing contractors training; and
- Inadequate financing and credit facilities.

Other issues identified include:

- ❖ Inadequate training facilities; a projected long-term shortage of human resources; lack of equipment corruption and high taxes;
- ❖ Medium-sized projects continue to decline, access to credit remains a serious problem for the majority of contractors, and the problem of construction equipment affects the performance of SMME civil contractors throughout the country; and
- ❖ On the basis of contractors’ annual returns submitted to the NCICM for the year 1999, about 73 percent of registered contractors complained of poor work opportunities, 56 percent complained of financial problems, and 26 percent cited lack of equipment as a problem.

These problems are not unique to Malawi. In a recent World Bank (2000) project undertaken by the NCICM that studied the development of SMME contractors in the

construction industry in ten Southern African countries. It was identified that the aforementioned problems were hindering the development of SMME contractors.

2.7.3 The National Construction Council of Tanzania (NCCT)

NCIM (2004) reported that after learning from the success story of Malawi's National Construction Industry Council since its establishment, a similar organisation was formed in Tanzania, known as the National Construction Council of Tanzania (NCCT). The roles of NCCT are similar to NCICM. The functions of the NCCT as cited in legislation (non-exhaustive), fall broadly into the following categories:

- Formal regulatory functions delegated by government, for example, the registration of contractors and the collection of associated charges;
- Development activities to promote the interests of key clients in the industry, for example, undertaking contractor training programmes and equipment hire services;
- Advisory activities, which may be directed either to government (concerning public procurement, industry standards or to clients (access to finance, business management), and
- The dissemination of information through conferences, newsletters and research.

NCCT (2003) stated that the mandate of the NCCT is a very demanding one with the challenge of not only meeting the needs of a variety of clients through a broad range of interventions, but also having to negotiate some potential conflicts between the functions. It is also entrusted with evaluating, registering and educating SMME contractors, which is proving to be a challenge in many aspects.

The NCCT (2003) has not generally been able to mount programmes to address all the stated functions. This is partly due to capacity constraints, as the council is supported by a relatively modest secretariat. It is also expected to be self financing, although there has been significant donor and government budget support in the start-up phase. The focus has thus tended to be on programmes likely to generate revenue to support operations and respond most clearly to the expressed needs of client organisations. One issue the NCCT is expected to address is the extent to which the council should directly undertake programmes or work through other parties or agencies. Somewhat against advice and expectations, it has largely chosen to carry out "in-house" training.

2.7.4 The National Construction Council OF Zambia (NCCZ)

An organisation known as the National Construction Council of Zambia (NCCZ), which is similar to the NCICM and NCCT, was formed in Zambia. They also wanted positive impact of improved infrastructure and job creation experienced by Tanzania and Malawi.

NCCZ (2003) observed that the Zambian construction industry had gone through some turbulent times. The industry, which performed well in the 1970s following the copper boom, went through some hard times in the 1990s and is now slowly picking up again. The industry contribution to GDP rose from 4.5 percent in 2000 to 8 percent in 2003. Statistics indicate that employment in the construction industry increased from 140,000 in 2000 to 150,000 in 2001. Today, a decade after liberalisation and privatisation, the Zambian construction industry continues to grapple with a number of problems such as inappropriate government policies, late payments, inadequate skills and a lack of equipment.

NCCZ (2003), whilst alluding to privatisation and economic liberalisation, have managed to attract both local and international private investment in infrastructure. Most of these projects have been undertaken and executed by foreign construction companies. Even public projects such as road maintenance, construction projects and other construction works have been undertaken largely by foreign construction firms. The few opportunities given to local and SMME contractors have resulted in complaints about the quality of finished products resulting from lack of competent staff, lack of equipment and weak financial resources. Local contractors failed to execute works to the required standards.

2.7.4.1 Contractors

Records from the Roads Department, National Roads Board, Association of Building and Civil Engineering Contractors (ABCEC) and the National Association of Small Scale Contractors (NASSC) indicate that there are 801 contractors in the Civil Works Sector in Zambia with 72 percent being small contractors, as shown in Table 2.1, below:

Table 2.2 Number and distribution of contractors

Contractor	Contractor	
	Local	Foreign
Unlimited, usually foreign firms better equipped. Has serviceable equipment or access thereto. Normally undertakes donor projects.	1	34
Medium. Access to equipment and appropriate qualified staff.	7	38
General. Limited access to equipment and finance	48	99
Emerging. Limited access to equipment and financial resources.	99	475
Some have well-trained staff, while the majority have not received formal training. Mostly family owned.		

Source: Uriyo, Mwila and Jensen (2004)

http://www.ilo.int/public/english/employment/recon/eiip/download/zam_contr_reg.pdf

2.7.4.2 Impact of NCCZ to date

NCCZ (2003) observed that the participation of the SMME contractors, especially the small sector, in the Zambian construction industry is only marginal and requires immediate redress to facilitate the development of a sustainable Zambian Construction Industry.

2.7.5 The Construction Industry Development Board (CIDB) of South Africa

CIDB (2005) refers to a South Africa National Workshop on sustainable contractor development to establish a common framework for enterprise growth and sustainability. It was convened jointly by the Construction Industry Development Board (CIDB), the Department of Public Works (DPW) and the Construction Education and Training Authority (CETA). Addressing the workshop, the then Deputy Minister of Public Works, Ntopile Kganyago, stated that the construction industry is emerging from decades of decline into a period of significant opportunity for empowerment. This basic strategy rests on two pillars: affirmative procurement (this creates opportunities for black SMME contractors) and development interventions to address key constraints to emerging contractors. The Deputy Minister wondered whether there has been success in creating opportunity and perhaps more importantly, whether the opportunities created were sustainable.

According to Khoza (2008), among the challenges facing SMME contractors are unsustainably high levels of competition for limited opportunities as a result of the

continuous flow of new entrants into the industry. More than 80 000 contractors are currently registered on the CIDB Register of Contractors. The CIDB Quarterly Monitor shows that of these, many of the contractors in Grades 2 to 4 will fail to win a tender in four years. Without work, contractors cannot establish track records that are essential to move up the CIDB grades. They also cannot develop or retain skills necessary to deliver construction projects.

2.9 Conclusive remarks

It is clear from the literature review that there are many constraints and challenges facing SMME contractors. Many researchers have attempted to highlight them.

The literature review also shows that much research has been conducted on challenges and constraints faced by SMMEs in other countries, but no comprehensive study has been carried out in Malawi.

This review shows that the challenges range from skills shortage, lack of legislation to support SMMEs, financing problems, lack of equipment, late payments, high cost of capital, lack of ethics when conducting their businesses, institutional weaknesses and projects not being completed on time.

The next chapter presents the methodology used for conducting the research.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

The aim and purpose of this chapter is to outline the research methodology utilised in the study, to comment on how the research was controlled and monitored, and to ensure validity and reliability of the research data and procedures associated with the subsequent analysis and presentation of the data.

3.1 Philosophical orientations

Prior to discussing relative to research methodologies, it is important to understand the underlying philosophical background of the investigation. This will help clarify research designs and indicate the kind of evidence required, and data captured and interpretation.

3.1.1 Definition of Research Methodology terms

Research methodology concerns the way in which researchers proceed to solve problems (Buys, 2002). Fellows and Liu (1997) define research methodology as the principles and procedures of logical thought process which are applied to a scientific investigation.

According to Runeson and Skitmore (1999:39) research method “*refers to the techniques that are used or are available for the research.*” It is vital that the methodology is given a careful consideration at the outset of the research so that the most suitable approaches and research methods are adopted.

Epistemology is derived from two Greek words: “episteme” “*which means knowledge or science and “logos” which means knowledge, information, theory or account*”. These two words demonstrate how epistemology is usually understood as “*being concerned with knowledge about knowledge*” (Johnson and Duberley, 2000:2). Accordingly, the assumption of the best way of studying by focusing on hard facts or opinions is an epistemological assumption.

A paradigm: *“is the patterning of the thinking of a person; it is a principal example among examples, an exemplar or model to follow according to which design actions are taken”* (Welma, Kruger and Mitchell, 2005:58).

Welma *et al.* (2005) define ontology as an assumption that individuals make about reality. For example, this study makes an assumption that SMME contractors are not trained in business management. This, in essence, is an ontological assumption.

3.1.2 Description and choice of research methods

Welman *et al.* (2005) argue that research could follow any paradigm based on the following centrism: phenomenology, positivism or triangulation paradigm.

3.1.2.1 Phenomenological Paradigm

According to Welman, *et al.*, (2005:191-193), the *“phenomelologists argue that the researcher observation is not the reality but an interpretation reality”*. Fellows and Liu state that a paradigm is a theoretical framework which includes a system by which people view events. Johnson and Duberley (2000), and Alvesson and Deetz (2000) argue that minds are not passive receivers of sense data; rather they automatically select, limit, organise, and interpret experiences of external reality. They further argue that it is impossible to detach the researcher from presuppositions due to cultural inheritance, especially concerning the philosophical dualism (between observable and the intangible mind) and technological achievements.

Phenomelological paradigm assumes that reality is socially constructed and therefore understanding of it is subjective, varied across situations and cultures, and is consciously ideological.

3.1.2.2 Positivist Paradigm

Johnson and Duberley (2000:38) quoted John Stuart Mill (1865) stating that *“though the mode of thought expressed by the terms positive and positivism is widely spread, the words themselves are, as usual, better known through the enemies of that mode of*

thinking than through its friends.” The positivist paradigm deals with the social world on the ontological assumption that reality is external and objective. It tries to inquire into this reality on the epistemological assumption that physical sciences are the basis for understanding the social world and hence the rationale for carrying out studies is to unravel universal laws that govern causal relationships through empirical studies that are not value-laden. Table 3.1 indicates the tenets of positivism (Johnson and Duberley, 2000).

Table 3.1 Central tenets of positivism in management research

Aim of research

Generation of causal laws	The aim of the research should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour
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Research approach

Unity of natural and social science method	The method of the natural sciences is the only rational source of knowledge and should therefore be adopted in the social sciences. This implies the preoccupations with:
--	---

- Internal validity;
- External validity
- Reliability; and
- Operationalisation.

Relationship of the research with researched

Independence theory & neutral observational language	The observable is independent is what is being observed. Therefore the observer can stand back and observe the world objectively.
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Value freedom	The choice of what is to be studied, and how to study it , can be determined by objective criteria rather than by human beliefs and interests
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Correspondence of theory of truth	Theory can be tested against irreducible statements of observation – the facts of the situation. Research is concerned with producing accounts that correspond to an independent reality
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Source: Johnson and Duberley (2000:39)

Johnson and Duberley (2000) observe that positivism is in two aspects: Comtean and logical positivism.

3.1.2.2.1 Comtean positivism

Johnson and Duberley (2000:20) quoting Andreski (1974) state that this positivism “confines itself to the discovering, through reason and observation combined, of the actual laws that govern the succession and similarity of phenomena. The explanation of the facts, now reduced to its real terms, consists in the establishment of a link between various phenomena and a few general facts, which diminish in number with the progress of science”.

3.1.2.2.2 Logical positivism

Logical positivism assumes that there is a neutral point at which an observer can stand and observe the external world objectively. Logical positivists believe that observation of the empirical world – through their senses – provides the only foundation for knowledge. Their version of empiricism entails the claim that such observation can be neutral, value free and objective.

Welma *et al.* (2005:192) observes that while the positivists aim at uncovering general laws of relationships and/or causality that apply to all people at all times. They require that a research design is completed before data collection. The anti-positivists usually favour emergent designs. “This means the researcher may adapt data collection procedures during the study to benefit from unknown data that only comes to light during research process”.

Shakantu (2005) argues that each research method has strengths and weaknesses. Some research methods are more appropriate for investigation of particular concepts than others. Therefore, given the nature of this problem, the research described in this treatise took the position of logical positivists. In this regard the research methodology adopted must be able to generate data that is objective, quantitative, and descriptive of constraints and challenges faced by SMME contractors.

In order to select the most appropriate research method, it is necessary to eliminate as far as possible those research methods that are not appropriate. Shakantu (2005) citing Meredith *et al.* (1989) states that although there is wide and varied pool of methods that

could be adopted, they can be significantly reduced. Table 3.2 demonstrates a distribution of appropriate research methods according to the nature of the research problem being addressed.

Table 3.2 Framework for research methods

Approach to knowledge generation	Direct observation of object reality	People's perception of object reality
Logical positivist/Empiricist	(A) Field study Field experiments	(B) Structured interviewing Survey research
Imperative	(C) Action research Case studies	(D) Historical analysis Delphi/Expert panel Intensive interviewing Introspective reflection

Source: Shakantu (2005:171) citing Meredith (1989)

The logic of preceding sections now allows the elimination of inappropriate research methods without having to investigate their validity further. It is therefore a prerequisite that the research method needs to be objective, representative, generalisable and quantitative. Therefore, methods listed in quadrants (C) and (D) (Table 3.2) are inappropriate for this study since they require a degree of interpretism detrimental to the objectivity of this study.

In addition, the literature examined in Chapter 2 demonstrates that constraints and challenges faced by SMME contractors cannot be directly observed. This indicates that the methods that appear in quadrant (A) of Table 3.2 can be eliminated.

By eliminating methods that appear in quadrants (A), (C) and (D) leaves a relatively limited set of methods that are appropriate for this study. A structured interview or survey research is appropriate to this study. Further analysis of the nature of the problem creates avenues for extensive consideration of these possibilities. The objective of the research was to establish the constraints and challenges faced by SMME contractors in Malawi. Structured interviews that require considerable involvement of the respondents is not convenient in terms of availability of resources. Due to resource constraints, it was established that the most appropriate primary research method is the survey research.

3.1.3 Triangulation Paradigm

Irrespective of the nature of the study, rigour and objectivity is paramount. This is where triangulation paradigm comes into play. Fellows and Liu (1997:95) defines triangulation as the “*use of two or more research methods to investigate the same, such as an experiment and interviews in a case study.*” The purpose of selecting this method is to eliminate disadvantages of the phenomenological and positivist paradigms whilst gaining the advantages of each, and of the combination – a multi-dimensional view of the subject, gained through synergy. Thus triangulation is about internal validation.

3.2 The sampling procedure

According to Fellows and Liu (1997), and Naoum (2007), sampling is necessary, it is almost impossible to examine the entire population. In order to obtain a good representation of the respondents, it is possible to use a sample of the population, which is much smaller than the total population, but sized and structured to be statistically representative. Clearly, the results from such sampling will not be exactly the same as if the whole population had been consulted, but the result is adequate for the purpose for which the information is required. Fellows and Liu (1997) assert that population parameters and sampling procedures are vital in the success of a study.

3.2.1 Sampling frame and method

Naoum (2007), and Fellows and Liu (2007) give the following procedures of sampling:

- Random sampling – Is a sampling procedure where the sample is derived by randomisation process from a homogenous or homogenous conglomerate texture population.
- Systematic sampling – This form of sampling procedure, as the name implies, is a systematic selection of certain items according to a predetermined criterion.
- Stratified sampling – This sampling procedure essentially uses stratified population instead of homogenous population.
- Cluster or area sampling – This sampling procedure entails sampling into groups of a large population which is spread over a large area.

Fellows and Liu (1997), argue that if there is no evidence of variation in the population structure, or if there is no reason to ignore the structure then random sampling procedure is appropriate. Random sampling procedure is chosen for this study because there is no evidence of variation in the constraints and challenges facing SMME contractors.

3.2.1.1 Target population

The sampling frame is the list of respondents from which the samples were drawn. It provides a complete listing of the whole population (Naoum, 2007). The focus population consists of quantity surveyors, engineers, architects, SMME contractors and construction managers involved in the construction industry within Malawi. The sample consisted of the following distribution of construction consultants and contractors:

Table 3.3 Respondents

Respondents	Town	Target Respondents	Questionnaires distributed	Number Responded	% of total respondents
Quantity surveyors	Blantyre	10	10	6	11.54
	Lilongwe	12	10	5	9.62
	Salima	3	3	1	1.92
Architects	Blantyre	11	11	6	11.54
	Lilongwe	13	11	4	7.69
	Chitipa	2	2	1	1.92
Engineers	Blantyre	8	8	4	7.69
	Lilongwe	7	6	2	3.85
SMME contractors	Blantyre	21	20	14	26.92
	Lilongwe	8	7	2	3.85
	Chiradzulu	1	1	1	1.92
Construction managers	Blantyre	5	5	3	5.77
	Lilongwe	6	6	3	5.77
Total		107	100	52	100.00

This represented a sample size of 107. Only 52 of the 107 target population responded. This is statistically a large response rate, as the size exceeds 30 percent as recommended by Wisniewski (1994). This is also explained in section 3.2.6.

3.2.2 The data

The data for this research consists of two types, namely primary and secondary data.

3.2.2.1 Primary data

The primary data consists of information obtained from questionnaires and the responses conducted with SMME contractors and consultants. These persons are in a

position of authority to reflect on the actual situation, which enables proper and accurate comparisons to be made. The aim was to design a simple, clear questionnaire with limited open-ended questions and using a series of check boxes. The assumption was that this could easily be completed by busy executives.

The procedures used by Buys (2004) were followed to stimulate interest in the research and to improve the response rate:

- To give each letter a personal appeal, approximately 80 percent of the covering letters (appendix A) were addressed to the managing directors of the firms. The names were obtained through telephone enquiries. Where the names could not be ascertained, “Dear sir/madam” was used;
- A reminder letter was sent after four weeks to all companies that did not reply to the questionnaire (Appendix B);
- The full name and address of the firm appeared on the letter. The addressees were assured of anonymity;
- The importance of the research to the respondent was emphasised.
- A promise that the results of the survey would be made available to all respondents was made;
- A self-addressed, paid envelope was enclosed for easy return of the questionnaire;
- The length of the questionnaire was kept to a minimum and did not require the respondents to write down lengthy answers: they merely had to select one of the given options; and
- Minor re-wording of some of the other questions to make the questionnaire more user friendly. Leedy (1993:187) emphasises that *“the language must be unmistakably clear”*.

3.2.3 The specific projected treatment of each sub-problem

3.2.3.1 Sub-problem one

SMME contractors lack training.

3.2.3.2 Data required

Training needs.

3.2.3.3 How the data was secured

Respondents did not have to disclose their identity when responding to the questionnaire. All the responses were treated as strictly confidential.

3.2.3.4 How data was presented

The data was analysed to determine the training constraints and challenges faced by SMME contractors.

3.2.4 Sub-problem two

SMME contractors lack access to finance.

3.2.4.1 Data required

Requirements such as collateral, for loan and finance requirements.

3.2.4.2 How the data was secured

Respondents did not have to disclose their identity when responding to the questionnaire. All the responses were treated as strictly confidential.

3.2.4.3 How data was presented

The data was analysed to determine the finance constraints and challenges faced by SMME contractors.

3.2.5 Sub-problem three

SMME contractors lack business management skills.

3.2.5.1 Data required

Depth or extent of business management skills.

3.2.5.2 How the data was secured

Respondents did not have to disclose their identity when responding to the questionnaire. All the responses were treated as strictly confidential.

3.2.5.3 How data was presented

The data was analysed to determine the management constraints and challenges faced by SMME contractors.

3.2.6 Sub-problem four

SMME contractors do not use construction software.

3.2.6.1 Data required

Construction IT skills.

3.2.6.2 How the data was secured

Respondents did not have to disclose their identity when responding to the questionnaire. All the responses were treated as strictly confidential.

3.2.6.3 How data was presented

The data was analysed to determine the IT skills constraints and challenges faced by SMME contractors.

3.2.7 Sub-problem five

SMMEs contractors do not conduct business ethically.

3.2.7.1 Data required

Ethical behaviour of SMME contractors.

3.2.7.2 How the data was secured

Respondents did not have to disclose their identity when responding to the questionnaire. All the responses were treated as strictly confidential.

3.2.7.3 How data was presented

The data was analysed to determine the ethical behaviour of SMME contractors.

3.2.8 Ethical considerations

A declaration form was signed by the researcher attesting that the work submitted in this treatise is all his, except for secondary sources which have been acknowledged, as listed in the bibliography.

3.2.9.2 Secondary data

Mullins (1994:23) defines secondary data as *“already published data collected for purposes other than the specific research at hand.”* The secondary data was obtained through a review of existing material such as journal publications, dissertations, newspapers, unpublished theses, books, the internet and conference papers.

Secondary data was selected according to its relevance to the research. The main criterion for the selection of secondary data was that it had to be relevant to the particular sub-problems and to test hypotheses.

Secondary data was obtained with the help of a LISO from the library at the Nelson Mandela Metropolitan University and made use of the following data bases:

- EBSCO host;
- Sabinet online;
- Science direct;
- Emerald insight;
- NMMU OPAC database;
- Google; and
- University of Malawi Libraries.

3.2.10 Contractor sample

In selecting contractors, an attempt was made to be as representative as possible. The same principle was used in the selection of the sampling frame. The SMME contractors selected were members of the NCICM in the MK75 million (building) and MK50 million (civil engineering) contractor categories and below. The consultants selected were mostly those registered with respective professional bodies and included those with substantial experience in the construction industry. Data was collected from SMME contractors and consultants in all three regions of Malawi, namely the northern, central and southern regions.

3.2.11 Questionnaire design

According to Desta (2006), a research design should ensure that the evidence collected addresses the research questions and is essential to ensure coherence and rigour. It is necessary because it is the questionnaire that will provide the data to test the validity of the problem statement and in order to acquire relevant data the appropriate question must be asked.

The questionnaire was designed with the aim of gathering information relevant to each sub-problem. The questionnaire consisted of section A and Section B. One questionnaire was designed for SMME contractors and consultants. Simple, clear and unambiguous language was used. The design was done by using input from the literature review. The draft questionnaire was pretested on a pilot study. Only persons in positions of authority were requested to respond.

Table 3.4 Questionnaire design

SECTION No.	SECTION NAME	SUB-PROBLEM ADDRESSED
A	Demographic information	Used to determine general information i.e. name, gender, age, experience, qualification etc
B	Need for training	Sub-problem 1
C	Lack of collateral to access finance/financing problems	Sub-problem 2
D	Lack of business skills	Sub-problem 3
E	Lack of construction software use	Sub-problem 4
F	Lack of ethics	Sub-problem 5

3.2.12 Testing of questionnaire – Pilot study

The questionnaire was quality tested by the research supervisor for precision of expression, question duplication, objectivity, suitability to problem situation and probability of favourable reception and return. Walliman (2001) recommends that questions should be pre-tested on a small population or pilot study. In accordance with the above recommendation, a draft questionnaire was sent to seven architects to obtain their comments regarding any items that they had difficulty in understanding and to determine the time it takes to complete the document. The pilot study indicated that the consultants and contractors took six (6) minutes to complete the questionnaire and they recommended that the “Not sure” option should be included in some questions.

3.2.13 Sample method

A short list of all practices and SMME contractors that met the sample requirements was used for random sampling. The contact details were recorded and telephonic contact was made to request the participation of the stakeholders in the research. Gay and Airasan (cited by Leedy and Ormound, 2005) have the following guidelines for the identification of a sufficient sample:

- The small population – less than 100 people – there is no need for sampling;
- If the population size is around 500, 50 percent of the population should be sampled;
- If the population is around 1500, 20 percent of the population should be sampled; and
- Beyond a certain point – at about 5000 units or more, a sample of 400 people is adequate.

Based on the information above, the target population for the survey did not require sampling

3.2.14 Questionnaire administration

The structured questionnaire consisted of sections A to F. There were 8 questions in section A and 5 questions for sections B to F. The first section covered the demographic

background and variables of respondents, namely location, gender, age, experience, status and education. Section B addressed the need for training and aspects relating to the running of a contracting or related business. Section C investigated financing problems. Section D addressed the issue of business management skills. Section E, investigated the usage of construction IT by the SMME cohort and lastly Section F addressed the issue of ethics among SMME construction firms.

Questionnaires were personally delivered in, most cases, to SMME contractors and consultants in the southern and central regions. For the northern region, questionnaires were posted using post office mail. A period of two weeks was stipulated for completion, upon which the responses could be faxed or emailed. Telephonic contact with the respondents was made twice, on the day of delivery and two days before collection to ensure that the survey was completed on time.

Once the completed questionnaires were received, a table was drawn representing each question and its subsequent results were tabulated. The results were mainly on percentage comparisons and structured roughly around the main themes of the identified problem and sub-problems.

3.2.15 Limitations

A number of potential constraints have been identified which could impede the smooth performance with regard to field work:

- The location of the researcher; and
- The response to questionnaires;

3.2.16 Bias

Leedy (1993) defines bias as any influence, condition or set of conditions that may singly or together distort the data from what may have been obtained under the conditions of pure chance.

The researcher made every effort to eliminate the likelihood of obtaining biased data.

3.2.17 The treatment and interpretation of data

The quantitative data collected through the questionnaires was statistically analysed and interpreted to establish:

- The key problems experienced by construction companies;
- The availability of business skills;
- Whether SMME contractors carry out their businesses in an ethical manner;
- Whether training SMME contractors is needed; and
- Whether SMME contractors use IT.

The data from the completed questionnaires was captured and summarised according to each question. A summary sheet, containing all the questions as listed in the questionnaire, was completed based on the responses of each individual contractor and professional. The data gathered was statistically interpreted and various ratios, percentages and relationships were established which were used to write up the analysis. The ratios and percentages are discussed in detail with the aim of ultimately arriving at a point where conclusions can be drawn and the hypotheses can be tested. The purpose of this presentation was to facilitate the effective analysis of data. The amount of detail and accuracy was such that it enabled an analysis that would provide sufficient information to solve each research problem.

The information obtained from the related literature was utilised to strengthen any arguments for or against the mentioned sub-problems. The qualitative data was interpreted deductively through logical reasoning.

3.3 Summary

The objective in this chapter was to outline the methodology used in this study. The data collected was used to identify trends pertaining to SMME contractors in Malawi and has also been used to test hypotheses projected. The results from the data collected in the survey are presented in the next chapter.

CHAPTER 4: RESULTS, DATA ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents an analysis of the constraints and challenges faced by SMME contractors in Malawi. It is systematically designed to effectively evaluate data in order to relate to the conceptual framework created for the study. The main statistics calculated in the data analysis are the mean, variance and frequency scores. Chilipunde (2007) citing Siegel and Castellan (1988) stated that the variance test is appropriate for detecting variation within a sample.

Questionnaires were sent to:

- 29 Quantity surveyors;
- 20 Architects;
- 10 Engineers;
- 6 Construction managers; and
- 35 SMME contractors involved in construction.

By 3rd May 2009, 52 responses were received. This represented a response rate of 52 percent. The relatively high response rate can be attributed to the collection procedures, namely personal administration, reminder and personal collection wherever possible.

Table 4.1 Sample Breakdown

Classification	Questionnaire distribution	Personal deliveries	Posted
Quantity Surveyors	29	22	7
Architects	20	15	5
Engineers	10	10	0
SMME Contractors	35	30	5
Construction Managers	6	4	4
Total	100	80	20

This is statistically a large sample, as the size exceeds 30 percent as recommended by (Wisniewski 1994). Of the 52 questionnaires received, 82 percent requested a copy of the summary of the findings to be emailed, posted or personally delivered to them.

4.1 Responses

The questionnaires were distributed to 100 randomly selected respondents, of which 52 were completed and returned. Compared to other results in the Building Industry by

Chiocha (2009) – 47.14 percent, Buys (2004) – 32.2 percent, Crafford (2002) – 19,3 percent and Smallwood (2000) – 7,3 percent the overall response rate of 52 percent is very good. As for the 48 percent unreturned questionnaires, this can be attributed to the inability of respondents to timeously complete and return them by 3 May 2009.

Another reason suggested for the lack of responses is the increasingly negative attitude of potential respondents to the perceived chore of having to complete questionnaires to a poor attitude towards research.

Table 4.2 Response Rate

Classification	Questionnaire Distribution	Number of responses	Percentage of responses against distribution (%)
Quantity Surveyors	29	13	44.5
Architects	20	11	55
Engineers	10	7	70
SMME Contractors	35	17	48.6
Construction managers	8	4	50.0
Total	100	52	52.0

4.2 Analysis of data

The data was analysed by using quantitative techniques. It is imperative that the reliability and validity of the data be taken into consideration when conducting research. The validity of data is defined in terms of whether or not data the measures what it is supposed to measure. According to Blose (2001:39), *“data reliability on the other hand can be defined as whether or not data measures a representative fraction of the target group.”*

4.3 Demographic background

The demographical data collected included the average years for which consultants and firms have been practising, personal involvement and highest qualification of the respondents.

4.3.1 Gender

Respondents to the questionnaires were:

- Predominantly males; and
- Females represented a minority of respondents.

Table 4.3 indicates the gender of respondents. According to Chilipunde (2007), this is a true reflection of the construction industry setup, which is predominantly male. Moss (2008) re-affirms 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.

Table 4.3 Gender

Classification	Questionnaire Distribution	Number of Responses	Percentage of respondents against distribution (%)
Male	85	44	51.7
Female	15	8	53.3
Total	100	52	52.0

4.3.2 Age of the respondents

Hughes (2003) stated that the age of the respondents is usually related to an experience profile. Table 4.4 indicates that the majority of 53.8 percent of the respondents fell within 25-34 years of age. The direct demographics of gender were deemed unnecessary as the data could be proven reliable due to the fact that the questionnaires were sent to consultants and senior staff members of respective firms. This indicates that respondents were mature enough to answer questions.

Table 4.4 Age of Respondents

Age in years	Number of respondents	Percentage of respondents against total (%)
16-25	5	9.6
25-34	28	53.8
35-44	12	23.1
45-54	5	9.6
55-64	1	1.9
65+	1	1.9
Total	52	100

4.3.3 Experience of respondents in the construction industry

The level of experience of respondents is of great importance to the credibility of the feedback and the reliability of the research as a whole. Table 4.5 shows experience in the industry. The table shows that:

- 44.2 percent of the respondents have been in the industry between 6-10 years; and
- 23.1 percent had between 0-5 years of construction experience.

The majority of respondents fall in the category of 6-10 years of experience. This could indicate that those filling questionnaires had relatively reasonable experience in the industry and their responses could be trusted.

Table 4.5 Experience in the Construction Industry

Number of years	Number of Respondents	Percentage of respondents against total
0-5	12	23.1
6-10	23	44.2
11-15	8	15.4
16-20	1	1.9
21+	5	9.6
Total	52	100

4.3.4 Experience of respondents in management

it is very important to have in-depth knowledge of a business that one undertakes. With such in-depth knowledge, it is easy to manage business rather than working on trial and error. Trial and error brings undesirable results;

- It is always costly;
- loss of profit is evident; and
- Clients lose confidence in the firm.

Table 4.6 indicates that:

- The greater percentage of respondents (65.4 percent) fell within 0-5 years experience in management;
- Followed by those who fell within 6-10 years of experience representing (19.2 percent); and
- The majority of respondents fall in the category of 0-5 years of experience in management.

This could indicate that those filling in the questionnaires did not have sufficient insight into the industry and their management analysis could be doubted.

Table 4.6 Experience in Management

Number of years	Number of Respondents	Percentage of respondents against total (%)
0-5	34	65.4
6-10	10	19.2
11-15	3	5.8
16-20	2	3.8
21+	2	3.8
Total	52	100

4.3.5 Personnel status

Table 4.7 indicates the form of involvement in the construction industry.

Table 4.7 Personnel Status

Classification	Targeted Population	Number of Questionnaires distributed	Number of Respondents	Percentage of respondents against total
Client	5	5	2	3.8
Consultant	66	61	28	53.8
Contractor	30	28	16	30.8
Mentor	6	6	2	3.8
Total	107	100	52	100

4.3.6 Highest qualification

Table 4.8 indicates that:

- The greater percentage (44.2 percent) of respondents had a certificate/National diploma;
- Followed by (37.5 percent) those who had a degree;
- Those with post graduate degrees accounted for 13.5 percent;
- 3.8 percent had Grade 8; and
- Grade 12 and tradesmen accounted for 1.9 percent each.

This means that respondents understood the research questions since most respondents had decent academic qualifications for example, post graduate qualifications (13.5%), degree holders (37.5%), degree/certificate holders (44.2%) and therefore, were able to answer them correctly.

Table 4.8 Highest Qualifications

Qualification	Targeted population	Questionnaires distributed	Number of Respondents	Percentage of respondents against total (%)
Grade 8	5	4	2	3.8
Grade 12	4	3	1	1.9
Tradesman	3	3	1	1.9
Cert or N/Dip	42	40	23	44.2
Degree	37	36	17	37.5
Post graduate	16	14	7	13.5
Total	107	100	52	100

4.4 Research data

4.4.1 Analysis and problems experienced

The research data from the questionnaire was used to investigate the need for training, financing problems, business skills, lack of information technology skills and ethics problems among SMME contractors.

4.4.2 Need for training

In terms of the need for training, scores ranged between 1, (indicating a very low need for training), and 5, (a very high need for training). Table 4.8 indicates that the need for training in financial management was identified as the highest, with a mean score of 3.82. The need was closely followed by training in interpretation of building drawings with a mean of 3.27. The element, training with regard to reading and writing, scored 3.03 which indicated that this element needs the least attention of all.

In summary, Table 4.9 indicates that although there is need for training in certain aspects, overall training on all aspects is needed except for reading and writing skills. The findings generally confirmed the studies by Moss (2007). The findings also confirm the observation by SAQA (2007).

Table 4.9 Need for training

Training pertaining to	Number of Respondents	Minimum	Maximum	Mean	Standard Deviation
Reading and writing skills	52	1	5	3.03	0.94
Interpretation of building drawings	52	1	5	3.18	1.26
Interpretation of bar charts	52	1	5	3.27	1.27
Management and administration of building sites	52	1	5	3.20	1.37
Financial Management	52	1	5	3.82	4.59

4.4.3 Lack of access to finance

Values ranged between 1, (strongly disagree), and 5, (strongly agree). An analysis of table 4.10 reveals the level of agreement by the respondents to various questions: Respondents strongly agree that inflexible credit terms from banks is a major problem with a mean of 4.16 whilst difficulties in accessing finance, late payments by clients and difficulties in obtaining loans are ranked second with a mean of 3.90. Difficulties in

obtaining advance working capital is ranked third, with a mean of 3.80, followed by problems in obtaining guarantees, insurance bonds and sureties with a mean of 3.74. Inflexible credit terms from suppliers is ranked fifth with a mean of 3.63.

Table 4.10 indicates that SMME contractors face many financing problems. This in turn gives rise to many undesirable problems like quality, time, unrest on site and abandonment of work among others. The findings were confirmed in studies by Uriyo *et al.* (2004); Shakantu *et al.*, (2007); Carson (2006): ILO (1987); Motlanthe (1990); Kapulula (2008) and Khoza (2008). Kayanula and Quartey (2000) also agreed with the findings and stated that access to finance remained a dominant constraint to SMME contractors in Malawi and Ghana.

Table 4.10 Lack of collateral to access finance

	1=Strongly disagree	2=disagree	3=Not sure	4=Agree	5=Strongly agree		
	Frequency						
Category	1	2	3	4	5	Mean	Std deviation
Access to finance	3	4	6	20	18	3.90	1.15
Inflexible credit terms from suppliers	2	7	8	22	10	3.63	1.09
Guarantee bonds, sureties and insurance bonds	2	8	6	19	15	3.74	1.17
Late payments	2	4	9	17	18	3.90	1.11
High tendering costs	2	11	17	14	4	3.15	1.01
Advance working capital	1	3	8	22	16	3.80	1.17
Loans	1	3	8	22	16	3.90	0.96
Inflexible credit terms	0	2	5	25	17	4.16	0.77

4.4.4 Lack of business management skills

Values ranged between 1, (strongly disagree), and 5, (strongly agree). An analysis of Table 4.10 shows the level of agreement by respondents to questions:

- Problems in financial control is ranked highest with a mean of 4.31;
- The Lack of cash-flow management skills is ranked the second with a mean of 4.27;
- Problems in financial management skills are ranked third with a mean of 4.22;
- Contract administration and credit management problems come fourth, followed by lack of book-keeping skills both with a mean of 4.18;
- Ranked sixth is contract document interpretation skills, with a mean of 4.18; and
- Lack of leadership and communication skills and lack of site management skills are both ranked lowest, with a mean of 3.91.

This shows that SMME contractors lack business management skills in running their firms. The results were confirmed in studies by Uriyo *et al.* (2004); Dlungwana *et al.* (2003); Shakantu *et al.* (2007); Fraser (1989); Myers (2004); Griffin (1990); Merrifield (1990), and Daniels and Ngwira (1993) that stated that SMME contractors lack business management skills. In contrast Kayanula and Quartey, (2000) observed that SMMEs generally use simple technology which does not require highly skilled workers.

Table 4.11 Lack of Business Management

	1=Strongly disagree	2=disagree	3=Not sure	4=Agree	5=Strongly agree		
	Frequency						
Category	1	2	3	4	5	Mean	Std deviation
Book-keeping	0	2	6	24	22	4.18	0.84
Contract administration	0	1	7	27	20	4.20	0.73
Leadership and communication	0	3	11	29	12	3.91	0.80
Financial management	0	3	7	20	25	4.22	0.88
Site management	0	5	9	27	14	3.91	0.89
Contract document interpretation	0	4	4	26	21	4.16	0.86
Financial control	0	4	5	16	30	4.31	0.92
Cash-flow management	1	3	5	17	29	4.27	0.97
Credit management	0	2	7	25	21	4.18	0.80

4.4.5 Lack of construction IT skills.

Values ranged between 1, (strongly disagree), and 5, (strongly agree). From Table 4.11 it is notable that respondents agree that there is lack of QS plus IT software use, ranking it the highest with a mean of 4.0 and the lack of computer operating skills is ranked second with a mean of 3.98. The lack of Primavera IT software used is ranked third. Respondents further agree that bar charts are not used to programme construction work, with a mean of 3.80. Finally, respondents also agree that they lacked use of Microsoft Project software, with a mean of 3.96.

Table 4.11 therefore reveals that SMME contractors do not use any type of construction software to do programming of construction work. It further shows that these contractors do not use bar charts in programming construction work and also lack computer operating skills. The findings confirmed the studies by Sun and Howard (2004), and the observations of Uriyo *et al.* (2004); Kululanga *et al.*, (2002) and Myers (2004) who acknowledged that IT knowledge management is relatively new in the construction industry. In most SMMEs contractors do not have information technology skills.

Table 4.12 Lack of construction software use

	1=Strongly disagree	2=disagree	3=Not sure	4=Agree	5=Strongly agree		
	Frequency						
Category	1	2	3	4	5	Mean	Std deviation
Use of Microsoft project software	2	9	7	15	19	3.76	1.23
Use of primavera software	3	2	13	9	24	3.96	1.20
QS plus software	3	3	12	5	27	4.00	1.26
Ghantt/bar charts	1	3	15	17	14	3.80	0.99
Computer operating skills	1	9	11	18	10	3.98	3.22

4.4.6 Ethics among SMME contractors

Values ranged between 1, (strongly disagree), and 5, (strongly agree). Table 4.12 shows that respondents agree that consultants from the firm which priced Bills of Quantities in secret for a contractor in exchange for money, is ranked first, with mean of 4.0. Secondly, consultants favouring some contractors and one consultant who would price the same tender document for two or more different SMME contractors, with a mean of 3.8. Political influence in awarding contracts and consultants seeking bribes from contractors are ranked third, with mean of 3.50. Table 4.12 indicates the prevalence of unethical conduct on the part of stakeholders.

The results confirm the findings of studies by Shakantu (2003); Chiocha (2006); CIDB (2009) and observations by Ray *et al.*, (2000); Mita (2008); Matechak (2008) and Goldstock (1990) all of which highlight the existence of unethical conduct in the construction industry.

Table 4.13 Lack of ethics

	1=Strongly disagree	2=disagree	3=Not sure	4=Agree	5=Strongly agree		
	Frequency						
Category	1	2	3	4	5	Mean	Std deviation
Colluding of tenders	2	10	18	13	7	3.3	1.07
Political influence in awarding contracts	2	7	16	14	10	3.5	1.10
One professional pricing same document for two or more clients	1	5	12	15	16	3.8	1.07
Professionals from the firm which produced Bills of Quantities pricing in secret for a contractor in exchange for money.	1	7	7	20	14	4.0	1.80
Bid rigging	5	8	12	15	10	3.4	1.26
Consultants favouring some contractors	2	7	7	17	17	3.8	1.18
Consultants seeking bribes from contractors	7	5	10	12	15	3.5	1.40

4.4.7 Summary and interpretation

Tables 4.8-4.12 list needs for training, finance problems, lack of business management skills, limited use of construction IT use and unethical conduct among some stakeholders. Respondents indicated which training needs are relevant, which business skills are lacking, the need for construction IT and the prevalence of unethical conduct among some stakeholders.

The demographic data indicates that there were an unequal number of research participants in all three regions of Malawi. This is because the population of the respondents in other regions is less than in Blantyre – Southern Region of Malawi. The demographic data further revealed that there was a bias towards male participants, partly due to the fact that males had historically dominated the industry. Importantly, data showed that the majority of respondents were those falling within 25-34 years old, whilst most respondents fell within 6-10 years of experience in the construction industry. The data also revealed that respondents had limited experience, falling within 0-5 years in management. Participants were mostly biased towards consultants and had either a Certificate or a National Diploma.

In terms of research data, this reveals that there is need to train SMME contractors in the following areas of interpretation of building drawings, management and administration of building sites and finally, financial management.

Respondents strongly agree that payment is made late and further agree that they are faced with inflexible credit terms from suppliers and banks. It is agreed that loans are difficult to obtain from banks and obtaining guarantees, insurance bonds and surety is a major barrier.

Lack of business management skills has been recognised as a major barrier by the respondents, strongly agreeing that finance and cash-flow management skills are ranking high. Respondents further agree that the lack of book-keeping, contract administration, leadership and communication, financial control and credit management skills are among the many challenges and constraints faced by SMME contractors.

SMME contractors do not use construction IT and hardly use bar charts to programme their construction work. They also lack computer operating skills.

It is strongly agreed by respondents that one professional price same document for two or more contractors. Consultants from the firm which produced Bills of Quantities pricing in secret for a contractor in exchange for money were real and indeed, consultants do seek bribes from contractors. It is further agreed that consultants favour some contractors and bids are rigged. The prevalence of unethical conduct among SMME contractors in carrying out their business is evident.

4.5 Testing of hypotheses

The review of the literature and the findings emanating from the survey were used to test the hypothesis

4.5.1 Hypothesis one

There is a lack of training opportunities among construction SMMEs.

The first hypothesis is supported by the following findings:

- The need for training in especially financial management is the greatest, with a mean score of 3.80, indicating a need for training;
- The need for training in the interpretation of bar charts, with a mean of 3.27 is highlighted;
- The need for training in management and administration of building sites is evident with a mean of 3.20; and
- The need for knowledge in interpretation of building drawings, with a mean of 3.18, reveals a need for training

4.5.2 Hypothesis number two

SMME contractors lack collateral needed to access finance.

The second hypothesis is supported by the following findings:

- Inflexible credit terms from banks is rated the first problem, scoring a mean of 4.16. This indicates that banks make conditions difficult for SMME contractors to access credit;

- Problems in obtaining loans, late payments and problems in accessing finance all were ranked second position, with a mean of 3.90. This indicates that there are problems in financing of projects due to lack of collateral;
- Problems in obtaining advance working capital is ranked third, this is another indication that the lack of collateral gives rise to problems in accessing advance working capital;
- Difficulties obtaining guarantee bonds, sureties and insurance bonds are ranked fourth with a mean of 3.74; and
- Inflexible credit terms from suppliers are the least on the order, with a mean of 3.63.

4.5.3 Hypothesis number three

There is a lack of business management skills among SMMEs.

The third hypothesis is supported by the following findings:

- The lack of financial control skills, with a mean score of 4.3,1 was the highest, indicating the strong need for improvement in this aspect;
- Lack of cash-flow management skills had a mean score of 4.27, which was the second highest level of the deficiency and indicates a strong need to improve;
- Lack of Financial management skills realised the third highest position, with a mean score of 4.22, indicating a strong need for improvement in this aspect;
- Lack of contract administration skills realised the fourth position, with a mean score of 4.20;
- Lack of book-keeping and credit management skills jointly realised the sixth position; and
- Lack of contract document interpretation and site management skills ranked the lowest, with means of 4.26 and 3.91 respectively.

4.5.4 Hypothesis number four

SMME contractors lack construction IT skills.

The fourth hypothesis is supported by the following findings:

- Lack of QS plus IT software scored the highest, with a mean of 4.0. This indicates that SMME do not use QS plus IT software;

- Lack of computer operating skills is ranked second, with a mean of 3.98. This indicates the need for improvement in computer skills;
- Lack of use of Primavera IT software is ranked third; and
- Lack of use of bar charts and Microsoft project software with mean of 3.80 and 3.76 respectively, fall last in the ratings.

4.5.4 Hypothesis number five

SMMEs contractors do not conduct business ethically.

The fifth hypothesis is supported by the following findings:

- Professionals from the firm which produced Bills of Materials pricing in secret for a contractor in exchange for money had a mean of 4.0, which was the highest indicating that the prevalence of this unethical conduct is very common;
- Consultants favouring some contractors had a mean score of 3.80, and one professional pricing the same document for two or more clients both scored the second highest rating unethical conduct is practised by some stakeholders;
- Political influence in awarding contracts and consultants seeking bribes from contractors came third, with a mean of 3.5; and
- Colluding of tenders came fourth, with a mean of 3.3.

4.6 Conclusive remarks

Although the hypotheses were well supported by the findings emanating from the survey, there is a great concern with respect to the lack of business management skills as reflected in the testing of hypothesis three. The next chapter will present the summary, conclusions and recommendations resulting from the study.

CHAPTER 5: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses conclusions and recommendations arising from the examination of the relevant literature and the findings derived from analysis of data.

The literature study suggested that SMME contractors face a host of problems ranging from those caused by clients, consultants, institutional weaknesses to corruption.

The study was conducted to investigate training needs, IT application in construction, level of business management skills, financial issues and ethical behaviour among SMME contractors. The study was premised on the following assumptions:

- There are training institutions in Malawi to train SMMEs;
- SMME contractors do not have collateral to access finance;
- SMME contractors are not trained in business management skills;
- There is an availability of construction software; and
- SMME contractors do not conduct their business unethically.

The literature study investigated the approach taken by Malawi, Zambia, South Africa, Tanzania, Lesotho and Ghana on SMME contractors. This is done through institutions, for example, NCCT, CIDB, NCCZ, CETA and other organisations. An empirical study was carried out to test the validity of the hypothesis. One set of the questionnaires was prepared for SMME contractors and professionals. The results were tabulated based on data gathered.

The research methodology used and how the data for the report was attained are detailed in Chapter 3. The chapter also indicates who was involved in the pilot interviews and what input was gained from those involved. The processes involved in compiling the questionnaire are also discussed.

The results of the survey are given in Chapter 4, with input from the construction consultants and SMME contractors. The empirical investigation revealed the need for training needs, lack of business skills, lack of IT skills and financing problems. The study

further investigated the ethics among stakeholders, revealing that some stakeholders conduct their business in an unethical manner.

5.1 Conclusions

From the findings of the research, the following conclusions can be made with regard to a “need for training”.

- The need for training in reading and writing skills was rated the lowest by the respondents. Although the need still exists (the mean score obtained through the ratings was slightly above and equal to the average mean) there are other aspects that should take priority;
- All other aspects requiring training were rated high, with need for training in financial management being rated the highest;
- It is thus being concluded that the need for training is immense. All aspects should be considered to be of equal importance; and
- In summary it can be concluded that training of SMME contractors is a necessity to ensure sustainable business enterprises.

Based on the findings from the research, the following conclusion can be made with regard to “investigate financing problems”; and

- All aspects on investigating financing problems were rated high with inflexible credit terms from banks rated the highest.

In summary, it can be concluded that SMME contractors face financing problems. This is mostly due to lack of collateral. This problem must be solved as it deters growth and development.

From the findings from the research, the following conclusions can be made regarding business skills:

- Site management as a problem was rated least by respondents. Although the problem still exists as the mean score obtained through the ratings was high, it is vital to address the problem as well; and
- All aspects related to investigating business management skills were rated high, with cash-flow management skills being rated the highest.

In summary, it can be inferred that most SMME contractors lack business management skills.

Following the findings from the research, the following conclusions can be made with regard to “Information technology skills”:

- All aspects with regard to investigating information technology skills were rated high, with the lack of QS plus software being rated the highest.

In summary, it can be concluded that SMME contractors lack vital skills in information technology and rarely use construction software use which aids in programming of work.

Following the findings from the research, the following conclusions can be made with regard to business ethics among SMME contractors:

- Colluding of tenders was rated least by respondents. Although the problem still exists as the mean score obtained through the ratings was high enough, it is vital to address the problem as well;
- All problems rooted in ethics problems were rated high, with professionals from the firm which produced Bills of Quantities pricing in secret for a contractor (in exchange for money) being rated the highest; and
- It is thus concluded that the need to address ethics as a problem is immense. All aspects should be of equal importance when addressing them.

In summary, it can be inferred that some SMME contractors conduct their business in an unethical manner.

5.2 Recommendations

From the research findings, it is clear that the construction industry in developing countries urgently needs to address the challenges and constraints they are facing. The treatise recommends a vigorous promotion of well structured SMME contractor development programmes. Given the necessary support from stakeholders, programmes and models could make a remarkable difference in easing the plight of SMME contractors, as well as that of the construction industry, in Malawi.

The findings of the study reveal that there is a tremendous need for training in the Malawian construction industry. Added to this, the study highlights strongly the lack of business management skills. It further recognises the financing constraints and challenges SMME contractors are facing. SMME contractors conduct their business in an unethical manner. The following are suggested to address contractors' constraints and challenges in the construction industry:

The construction industry stakeholders need to urgently implement supportive legislation to create an enabling environment for SMME contractors to grow in the construction market.

Contractor development programmes and models should be implemented urgently to develop a culture of continuous improvement. Education should contribute to a culture of learning, knowledge creation and knowledge sharing.

Malawi should embark on strategic programmes to promote the development of skills in areas of management, technical, book-keeping, supervisory, estimating and tendering skills to enable entrepreneurs run their firms profitably and in a sustainable manner. This means that SMME contractors and the contractor development programmes should be carefully integrated into a streamlined effort designed to build their capacity to grow.

Programmes for developing SMME contractors should be implemented with a clear and supportive policy framework which encourages co-operation through joint ventures, partnering and subcontracting which encourages exploitation between contractors of different sizes.

The Malawi Government should be putting aside money every financial year to lend SMME contractors once a project has been awarded to the contractors without requiring collateral but maybe a form of reasonable insurance must be requested from SMME contractors.

5.3 Directions for further research

There is need for further research. This will help identify many constraints SMME contractors are facing in Malawi, similar research will be conducted at a PhD level to

analyse all the constraints and challenges faced by SMME contractors in Malawi. In addition to that construction industry stakeholders were informed of the findings of this study in order for them to take an initiative to address these issues. The areas include:

- (i) Construction institutional weaknesses in Malawi.
- (ii) How can we further promote the SMME contractor sector in Malawi?
- (iii) What are the internal and external sources of finance that SMME contractors require? Do the sources of finance vary with firm size?
- (iv) Does ownership affect firm performance?
- (v) Have these sources changed since institutions were established to oversee the construction industry? How have these changes affected employment, income, growth and consequently, poverty alleviation?

5.4 Closing statement

The construction industry demonstrated tremendous growth in the past years. With the industry not showing any indication of reduced demand, it has become extremely important to train SMME contractors to ensure that they are competent.

The construction industry in Malawi requires sustainable SMME contractors who are able to contribute to the socio-economic and socio-environmental needs of society. SMME contractors should be able to provide sustainable and create employment in order to alleviate poverty. The expectation is that they will follow become best practice once a contract has been awarded to the contractor.

The research has revealed that SMME contractors face a variety of constraints. The specific problems differ by country, but many are related. Access to finance remains a dominant constraint to SMME contractors in Malawi. Other constraints faced by the sector include: lack of access to appropriate technology; the existence of laws, regulations and rules that impede the development of the sector; weak institutional capacity and lack of management skills and training.

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APPENDICES

APPENDIX A: COVER LETTER



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29th March 2009

Dear SMME Contractor/Consultant,

**RESEARCH: AN INVESTIGATION OF CONSTRAINTS AND CHALLENGES
FACED BY SMALL, MEDIUM AND MICRO ENTERPRISE CONTRACTORS IN
MALAWI.**

I write to seek your assistance in completing the attached questionnaire for my final-year treatise on the above mentioned topic.

The research forms part of the requirements for the Master of Science degree in Built Environment specialising in Project Management at Nelson Mandela Metropolitan University.

The major objective of the study is to identify the challenges and constraints faced by small, medium and micro-enterprise contractors in the construction industry in Malawi and suggesting possible solutions.

Everyone stand to benefit from the study as it will critically look at ways how the SMME contractors can contribute positively and how these constraints can be eradicated.

I would be very grateful if you could complete the attached questionnaire and return it in the addressed, prepaid envelope, faxed or emailed to the undersigned using the above contact details. Needless to say, the information provided will be treated with strict confidentiality and names of individual firms will not be identified. Equally, a copy of the summary report will be available to co-operating firms. The response to the questionnaire should take about six minutes of your available time.

I look forward to receiving your response by not later than 10th April 2009 please.

Thank you in advance.

Yours faithfully,

Rodrick L Chilipunde

Student/Researcher

Prof. Winston Shakantu

Supervisor

APPENDIX B: REMINDER LETTER



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17 April 2009

REMINDER

Dear SMME Contractor/Consultant,

RESEARCH: AN INVESTIGATION OF CONSTRAINTS AND CHALLENGES FACED BY SMALL, MEDIUM AND MICRO-ENTERPRISE CONTRACTORS IN MALAWI.

A questionnaire was posted to you a few weeks ago for completion. Up to date I have not received your completed questionnaire.

If you have completed and returned the questionnaire before you received this friendly reminder, many thanks for your participation. Please ignore then the rest of the letter. I realize and appreciate the fact that your time is very limited, but would appreciate it if you can complete the questionnaire and return it at your earliest convenience. In the case where you did not receive the questionnaire but are willing to assist in the above research, please contact me so that the necessary arrangements can be made.

Your support is highly appreciated and thank you for your time – without your input, this research project will not be successful.

Yours sincerely

Rodrick L Chilipunde

Student/Researcher

Prof. Winston Shakantu

Supervisor

APPENDIX C: QUESTIONNAIRE

SECTION A: Demographic Information

1 Name:⁽¹⁾

2 Surname:⁽²⁾

3 Physical location/ City/District:⁽³⁾

4 Gender (Tick appropriate box)
 Male Female⁽⁴⁾

5 Age (Tick appropriate box)⁽⁵⁾

⁽⁶⁾ 16-24	⁽⁷⁾ 25-34	⁽⁸⁾ 35-44	⁽⁹⁾ 45-54	⁽¹⁰⁾ 55-64	⁽¹¹⁾ 65+
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6 Total experience in Construction Industry (Tick appropriate box)

⁽¹²⁾ 0-5	⁽¹³⁾ 6-10	⁽¹⁴⁾ 11-15	⁽¹⁵⁾ 16-20	⁽¹⁶⁾ 21+
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7 Total experience in management (Tick appropriate box)

⁽¹⁶⁾ 0-5	⁽¹⁷⁾ 6-10	⁽¹⁸⁾ 11-15	⁽¹⁹⁾ 16-20	⁽²⁰⁾ 21+
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8 Personal involvement (Tick appropriate box)

⁽²¹⁾ Client	⁽²²⁾ Consultant	⁽²³⁾ Mentor	⁽²⁴⁾ Contractor
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9 Highest qualification

⁽²⁵⁾ Grade 8	⁽²⁶⁾ Grade 12	⁽²⁷⁾ Tradesman	⁽²⁸⁾ Cert or N/Dip	⁽²⁹⁾ Degree	⁽³⁰⁾ Post Grad
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SECTION B: Need for training (Classroom situation).

Note:

Training is defined as the academic instruction with notes/literature in a classroom situation on various aspects relating to the running of a contracting or related business.

In terms of SMME contractors how would you rate the need for training (academic – situation) with regard to the following aspects

- 1 Very low/Poor
- 2 Low/Below Average
- 3 Average
- 4 High / Above Average
- 5 Very High / Excellent

1 Training with regard to reading and writing skills

⁽³¹⁾ 1	⁽³²⁾ 2	⁽³³⁾ 3	⁽³⁴⁾ 4	⁽³⁵⁾ 5
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2 Training with regard to reading and interpretation of building drawings

⁽³⁶⁾ 1	⁽³⁷⁾ 2	⁽³⁸⁾ 3	⁽³⁹⁾ 4	⁽⁴⁰⁾ 5
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3 Training with regard to reading and interpretation of construction programmes/bar chart

(41)	(42)	(43)	(44)	(45)
1	2	3	4	5

4 Training with regard to management and administration of the building site

(46)	(47)	(48)	(49)	(50)
1	2	3	4	5

5 Training with regard to financial management and cost control

(51)	(52)	(53)	(54)	(55)
1	2	3	4	5

SECTION C: lack collateral to access finance

Note

The following statements are related to lack of collateral to access project funding by small, medium and micro-enterprise contractors. To what extent do you agree that contractors face financing problems?

In terms of SMME contractors how would you rate financing problems as faced by SMME contractors with regard to the following aspects?

Note

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral/Not sure
- 4 Agree
- 5 Strongly agree

1 Access to finance

(56)	(57)	(58)	(59)	(60)
1	2	3	4	5

2 Inflexible credit terms from suppliers

(61)	(62)	(63)	(64)	(65)
1	2	3	4	5

3 Problems in obtaining guarantee bonds, sureties and insurance bonds

(66)	(67)	(68)	(69)	(70)
1	2	3	4	5

4 Late payments by clients

(71)	(72)	(73)	(74)	(75)
1	2	3	4	5

5 High tendering costs

(76)	(77)	(78)	(79)	(80)
1	2	3	4	5

6 Problems in obtaining advance working capital/client's payment advance

(81)	(82)	(83)	(84)	(85)
1	2	3	4	5

7 Problems in obtaining loans to finance projects

(86)	(87)	(88)	(89)	(90)
1	2	3	4	5

8 Inflexible credit terms from banks

(91)	(92)	(93)	(94)	(95)
1	2	3	4	5

SECTION D: lack of business management skills

Note

The following statements are related to lack of business management skills by small, medium and micro-enterprise contractors. To what extent do you agree that small, medium and micro-enterprise contractors lack business management skills?

In terms of SMME contractors how would you rate lack of business management skills in running their businesses with regard to the following aspects?

Note

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral/Not sure
- 4 Agree
- 5 Strongly agree

1 Book-keeping

(96)	(97)	(98)	(99)	(100)
1	2	3	4	5

2 Contract administration

(101)	(102)	(103)	(104)	(105)
1	2	3	4	5

3 leadership and communication

(106)	(107)	(108)	(109)	(110)
1	2	3	4	5

4 Finance management

(111)	(112)	(113)	(114)	(115)
1	2	3	4	5

5 Site management

(116)	(117)	(118)	(119)	(120)
1	2	3	4	5

6 Contract documents interpretation

(121)	(122)	(123)	(124)	(125)
1	2	3	4	5

7 Financial control

(126)	(127)	(128)	(129)	(130)
1	2	3	4	5

8 Cash-flow management

(131)	(132)	(133)	(134)	(135)
1	2	3	4	5

9 Credit Management

(136)	(137)	(138)	(139)	(140)
1	2	3	4	5

SECTION E: lack of construction software use

The following statements are related to lack of software use by small, medium and micro-enterprise contractors.

In terms of SMME contractors how would you rate the lack of software use with regard to the following aspects?

Note

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral/Not sure
- 4 Agree
- 5 Strongly agree

1 Use of Microsoft Project Software

(141)	(142)	(143)	(145)	(146)
1	2	3	4	5

2 Use of Primavera Software

(147)	(148)	(149)	(150)	(151)
1	2	3	4	5

3 QS plus Software

(152)	(153)	(154)	(155)	(156)
1	2	3	4	5

4 Gantt / bar charts for programming of works

(157)	(158)	(159)	(160)	(161)
1	2	3	4	5

5 Computer operating skills

(162)	(163)	(164)	(165)	(166)
1	2	3	4	5

SECTION F: Lack of ethics (Classroom situation).

Note

The following statements are related to lack of ethics in contract bidding by small, medium and micro-enterprise contractors. To what extent do you agree that the following lead to unethical behaviour?

In terms of SMME contractors how would you rate the lack of ethics with regard to the following aspects

Note

- 1 Strongly disagree
- 2 Disagree
- 3 Neutral/Not sure
- 4 Agree
- 5 Strongly agree

1 Colluding of tenders

(167)	(168)	(169)	(170)	(171)
1	2	3	4	5

2 Political influence in awarding contracts

(172)	(173)	(174)	(175)	(176)
1	2	3	4	5

3 One professional pricing same document for two or more clients

(177)	(178)	(179)	(180)	(181)
1	2	3	4	5

4 Professionals from the firm which produced Bills of Quantities pricing the same document in secret for a contractor in exchange for money.

(182)	(183)	(184)	(185)	(186)
1	2	3	4	5

5 Bid rigging (influencing tender results using corrupt ways).

(187)	(188)	(189)	(190)	(191)
1	2	3	4	5

6 Consultants favouring some contractors

(192)	(193)	(194)	(195)	(196)
1	2	3	4	5

7 Consultants seeking bribes from contractors

(197)	(198)	(199)	(200)	(201)
1	2	3	4	5