KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

COLLEGE OF ART AND BUILT ENVIRONMENT

FACULTY OF BUILT ENVIRONMENT

DEPARTMENT OF BUILDING TECHNOLOGY

DEVELOPING THE CAPACITIES OF SMALL-SCALE BUILDING CONTRACTORS THROUGH MANAGEMENT CONTRACTING PROCUREMENT SYSTEM

BY

ASANTE JOSEPH

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DECLARATION

I hereby declare that this submission is my own work towards the MPhil. Construction Management and that, to the best of my knowledge, it contains no material previously published by another person nor material which has been accepted for the award of any other degree of the University, except where due acknowledgment has been made in the text.

Asante Joseph (PG 9126413) …….. ……..

(Student name and ID) (Signature) (Date)

Certified by:

Prof. Edward Badu …… ……

(Supervisor) (Signature) (Date)

Dr. Bernard K. Baiden …… ……

(Head of Department) (Signature) (Date)

DEDICATION

This work is dedicated to first and foremost my creator. Secondly to my mother Grace Osei, my wife Gifty Afenyi and my wonderful children Benedict Korang Adu-Asante and Cassandra Serwaa Adu-Asante.

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ABSTRACT

Small-scale building contractors are very important to the Ghanaian economy and the building construction industry as they account for over 95% of building contracting firms and over 90% of building and civil construction job markets in Ghana. However, they are confronted with various challenges that affect their development. Thus the aim of this study wasto explore the application of management contracting procurement system concept as a capacity-building strategy to develop small-scale building contractors in Ghana. The specific objectives were:to identify the critical capacity-needs of small-scale contractors; to identify the benefits of sub-contracting relationship; to identify the potential obstacles to the implementation of management contracting procurement;to identify the possible measures to promote the implementation of management contracting procurement; and topropose a capacity-building framework through the implementation of management contracting procurement system concept. Data generated from the survey was further analysed using mean score ranking, factor analysisand analysis of variance (ANOVA) through the use statistical package for social scientists (SPSS V 20). The three most important capacity-needs of small-scale building contractors identified from the study were; the managerial skills development, prompt payment system and lessening of political interference in awarding public contract. Additionally, the three main benefits obtainable from sub-contracting relationship by the small-scale building contractors were; transfer of technology, job opportunities and improved credit worthiness. Moreover, inadequate knowledge, absence of qualified personnel, lack of confidence in management contracting and absence of enabling law were identified as the potential obstacles to the implementation of management

contracting procurement. But, the study identified developing a regulatory framework for management contracting practice, organising seminars on management contracting for stakeholders and revision of existing rule and documents to recognise other non-traditional procurement methodsas the most important measures to promote management contracting procurement. Using the obstacles, measures and the benefits of sub-contracting relationship identified from the study, a capacity building framework was developed based on the concept of management contracting procurement system. The study recommends for job opportunities, business development programmes and awareness creation on the management contracting procurement to facilitate the development of the small-scale building contractors in Ghana.

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LIST OF ACRONYMS

CIDB	Construction Industry Development Board
CIOB	Chartered Institute of Builders
GRATIS	Ghana Appropriate Technology Industrial Service
HND	Higher National Diploma
IET	Institution of Engineers and Technology
ILO	International Labour Organisation
ITTUs	Intermediate Technology Transfer Units
MC	Management Contractor
MCPS	Management Contracting Procurement System
MMDAs	Metropolitan/Municipal/District Assemblies
MMDAEs	Metropolitan/Municipal/District Assemblies Engineers
MRH	Ministry of Road and Highways
MWRWH	Ministries of Water Resources, Works and Housing
NBSSI	National Board for Small Scale Industries
OECD	Organisation for Economic Co-operation and Development
PMs	Project Managers
SMEs	Small and Medium Enterprises
SSBCs	Small-Scale Building Contractors
UNCHS	United Nations Commission on Human Settlements
UNCTAD	United Nations Conference on Trade and Development

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

The development of Small and Medium Enterprise' (SMEs) for economy growth in developing countries including Ghana cannot be underestimated because SMEs contribute immensely to every nation's economy. There is no doubt that thehealth of every economy is dependent very much on the success or failure of SMEs (Altenburg and Eckhart, 2006). SMEs have been described as the engine of economy growth, as they constitute bulk of the job and wealth creators. According to UNCHS (1996) SMEs are the sources of income, training opportunities and provide important basic services for rural people. But, SMEs are confronted with various challenges that hinder their development. Huang and Brown (1999) identify marketing deficiencies, management and business skill constraint and human resources, whereas, Bartlett and Bukvic (2001) identify the high cost of capital and bureaucracy, as some of the challenges faced by SMEs. For that reason the promotion of SMEs in national economies has always been the major strategy of most countries (Altenburg and Eckhart, 2006; Schwartz and Bar-El, 2004).

Contracting contractors' are major stakeholders in the drive for excellence in the Ghanaian construction industry (Ofori-Kuragu, 2013). Contractors play a very critical role in the delivery of physical infrastructure that forms the basis for national transformation agenda (UNCHS, 1996). The bulk of contracting contractors just as in most industries are in the category of small and medium-sized. Small-ScaleBuilding

Contractors (SSBCs) for instance represent over 95% of building contracting firms, and account for over 90% of construction job markets in Ghana (Amoah et. al., 2011). Similar to SMEs in other industries small-scale building contractors are challenged in many ways. A practicable policy is therefore required to promote the development of small-scale contractors, against the backdrop that the local contractors are unable to compete with the foreign counterparts for international competitive jobseven in Ghana (Laryea and Mensah, 2010).

To address the issues of inadequate capacities many developing countries have tried to use both national strategies and international arrangements all in an attempt to transform the capacitiesof their localindustries (Hoekman et al., 2004). Deardorff and Djankov (2000) argue that one strategy that has not received the needed attention, and has not been examined for its relative importance to capacity-building is sub-contracting arrangement. The capacity-building strategy,Taymaz (2004) argues as the very effective and efficient medium to develop the capacities of SMEs; also a strategy that provides the necessary resources support and distribution to SMEs (Wong, 1997).

Considering the level of effectiveness of sub-contracting and the value of procurement in transforming the capacities of SMEs, then, Management Contracting Procurement System (MCPS) has theadvantage and potential to transform small-scale building contractors if managed effectively (Bentall, et al., 1999). In addition to the significant contribution of management contracting procurementtowards the capacity-building of small-scale contractorsthat work as sub-contractors (Komu et al, 2012); it also improves the construction project management because of the involvement of the contractors in the early stage of the project (Komu et al 2012; Adekunle 2001). It is

imperative therefore that government being a single largest investor in the industry and the regulator of the industry by the virtue of its expenditure can adopt management contracting procurement as an economic policy to develop small-scale contractors as pertain in countries like South Africa (Broad-Based Black Economic Empowerment) (Act 53 of 2003).

1.2 PROBLEM STATEMENT

Despite the enormous contribution of SMEs to every economy,empirical evidence also suggests that a considerable number of small-scale contractors lack the ability to meet the standards required within the industry they operate(Thwala and Mvubu 2009).Ladzani and Van Vuuren (2002) suggest that about two thirds of all SMEs, including small-scale contractors' start-ups fail within the first five years. This unfortunate situation is arguably largely blamed on the inadequate capacity as a result of the various challenges they encounter.

According to Ofori (2009) the challenges that small and medium contractors encounter include: access to market information; work opportunities; access to finance and other resources; opportunities to develop technical and managerial capabilities and opportunities to form mutually beneficial networks with potential business partners within the industry. Acknowledgment of these challenges has prompted many countries to implement various policies and strategies to develop their local contracting firms(Ofori, 2007). Management Contracting Procurement System has been cited as one strategy that can provide the necessary platform to build the capacities of small and medium construction enterprise (Komu et al, 2011). Similarly, capacities of small-scale building contractors' in Ghana can be transformed by applying management contracting

procurement system concept. The question now arises as to whether small-scale building contractors in Ghanacan derive any benefits from sub-contracting relationship with management contractor. What could be the impediments to the implementation of the management contracting procurement systemin Ghana?

1.3 AIM

The aim of this study was to explore the application of management contracting procurement system concept as a capacity-building strategy to develop small-scale building contractors in Ghana.

1.4 SPECIFIC OBJECTIVES

In order to achieve the aim, the following objectives were set:

- Identify the critical capacity-needs of small-scale building contractors;
- Identify the benefits of sub-contracting relationship towards the capacity building of small-scale building contractors;
- Identify the potential obstacles to the implementation of management contracting procurement system in Ghanaian building construction industry;
- Identify the key measures to promote the implementation of management contracting procurement system in Ghanaian building construction industry; and
- To propose a capacity-building framework through the implementation of management contracting procurement system concept.

1.5 RESEARCH QUESTIONS

To help achieve the objectives, the following questions were asked;

- What are the capacity-building needs of small-scale building contractors?
- What are the benefits of sub-contracting relationship towards the capacity building of small-scale building contractors?
- What are the potential obstacles to the implementation of management contracting procurement system in Ghanaian building construction industry?
- What are the key measures to promote the implementation of management contracting procurement system in Ghanaian building construction industry?

1.6 SCOPE OF THE STUDY

The study focused on how to build the capacities of contractors in the financial class of D3K3 only according to the Ministry of Water Resources, Works and Housing classification guidelines in Ghana. This class of contractors are qualified to undertake government project (building works and civil works) not exceeding US$200,000. The study covered only the D3K3 contractors who have or have had working relationship with the district assemblies (local government authorities) in Ghana. Survey in the form of questionnaires was conducted with the D3K3 contractors, Client (District Engineers), Consultancy Firms (Quantity Surveyors, Structural Engineers and Architects) and Project Officers of selected foreign building construction firms. The study covered one hundred and forty (140) metropolitan/municipal/district assemblies across the country.

1.7 METHODOLOGY

Quantitative research methodology was largely used for this study through structured questionnaires, though an amount of qualitative approach was used to gather some data in a pilot study to identify the appropriate variables for the study. The responses of the questionnaires were then analysed using different statistical techniques (mean score ranking, factor analysis and analysis of variance). The data collected on the objective to identifying the critical capacity-needs of SSBCs were analysed with factor analysis. In order to identify the benefits of sub-contracting relationship the data acquired from the survey were analysed with mean score ranking. Similarly, factor analysis was used to examine the data on potential obstacles to MCPS and one way ANOVA combined with Least Significant Difference were employed to scrutinize the data on the key measures to promote management contracting procurement.

1.8 SIGNIFICANCE OF THE STUDY

Ghana lacks both empirical and theoretical research in this area of study. Therefore, the relevance of this study to Ghana and Ghanaian construction industry include:

- Contribute to the stock of knowledge on the capacity-building strategies of local contracting firms in Ghana.
- The findings and recommendations could lead to the development of policies aiming at supporting small-scale contractors just as those in the manufacturing sector.
- The proposed framework will form a basis for the development of other capacity-building strategies for the building construction industry in Ghana.

1.9 RESEARCH OUTLINE

This research was divided into five chapters. Chapter one described the general introduction: the background of the study; aim; research objectives and questions; overview of the research methods; research process; significance of the study; problem statement; the aim; specific objectives; research questions; research methodology; research process; limitation and structure of the study. The second chapter reviewed the pertinent literature on role of construction industry; contractor development programmes and capacity building; overview of SMEs development initiatives in Ghana; challenges faced by SME construction contractor; measures to develop SME contractors; types of procurement systems and their impact on project; management contracting procurement system; sub-contracting towards the development of SMEs and public procurement system towards the development of SMEs.The chapter three highlighted the methodology adopted for the study: sources and type of data collected, sample size determination and methods used to analyse the data. The fourth chapter presented and discuss' the results obtained from the data. Finally, the chapter five presented the summary of key findings, conclusions, recommendations, limitations of the study and suggestions on future studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter examines the relevant topics of interest to this study. The key areas covered include; the role of construction industry, overview of Ghana construction industry, contractor development programmes, challenges faced by SMEs, procurement systems, management contracting procurement system and sub-contracting were examined to provide basis for the study.

2.2 ROLE OF CONSTRUCTION INDUSTRY IN THE ECONOMY

The Construction Industry is a complex sector of the economy (Hillebrandt, 1985). The author explains that it involves a broad range of stakeholders and has wide ranging linkages with other sectors such as manufacturing and the use of materials, energy, finance, labour and equipment. The Construction Industry contributes between 5 and 10 percent of gross domestic product (GDP) in all countries and employs up to 10 percent of the working population (Ofori, 2012). Thus it contributes significantly to the wealth of many economies, as measured by the GDP. Hillebrandt (1985) further suggest; that in both developed and developing countries, the construction industriescontribute substantially to GDP, and responsible for about half of the capital formation. Due to the linkages with other industries it is very strategic to every country's economy. According to UNCTAD (2000), the health of the every economy can be measured by the level of construction activities. The industry provides critical infrastructure and buildings on which all other sectors of the economy depend. The industry provides roads, ports,

harbours, stores, offices, shelter and other infrastructural which are indispensable for production.

Globally, the industry is considered as one approach to create employment and drive the economy of many countries. In many countries construction industry is used as tool to stimulate the economy whenever a country is in economic recession. ILO (2001) reveals that Construction Industry is the single largest employer in most countries, and probably the world's largest industry. It offers employment opportunities to millions of unskilled, semi-skilled, skilled and professionals.

2.2.1 Overview of Ghanaian Construction Industry

The construction industry in Ghana is currently characterised by a large number of SMEs Contractors and a small number of large foreign contractors dominating the construction market especially in the area of donor-funded projects (Osei, 2013; Eyiah and Cook 2003). Gyadu-Asiedu (2009) postulates that the main stakeholders in the Ghana construction industry consist of: the clients, consultants and contractors. Among the clients, the government is the major initiator of infrastructure projects and dominates the sector (Sutton and Kpentey, 2012).

The Ministries of Water Resources, Works and Housing (MWRWH) and Ministry of Road and Highways (MRH) are responsible for the policies on the construction industry in Ghana. In the light of that, any contractor who intends to undertake government funded projects are required to register with the appropriate government ministry and be classified (Eyiah, 2004). The MRH categorises the contractors into A, B, C, and S and MWRWH categorises contractors into categories D and K. The ministries further

classify the contractors into financial classes 1, 2, 3 and 4 based on the contractors' technical and managerial expertise, financial standing, previous experience, and equipment and plant holding. But both MRH and MWRWH do not have an up-to-date list of contractors operating within their sectors (Eyiah, 2004).

Table 2.1 Classification of Ghanaian Contractors

Financial Class	Contractor Description	Financial Limit of Projects
1	D1K1	US$500,000.00 upwards
2	D2K2	US$ 500,000.00
3	D3K3	US$200,000.00
4	D4K4	US$ 75,000.00

Source: Ofori-Kuragu (2013)

2.3 CONTRACTOR DEVELOPMENT (CAPACITY BUILDING)PROGRAMMES

According to Eyiah (2004) contractor development is not a generic term, but has been generally used to describe the use of management and economic principle to remove the challenges affecting the development local contractors. The South Africa Construction Industry Development Board (2011) explains that the objectives of contractor development programmes include: improvement of the overall performance of contractors; provision of opportunities for and to grow small contracting enterprises; promotion of affirmative action; improvement of the performance of rural contractors; and improvement of the ability of local industry to compete with international construction firms.

Many developing countries adopted various strategies with the aim of assisting the local contractors to build their capacities. Ofori (2007) catalogues a number of these strategies. For example, Malaysia adopted a policy of limiting the participation of foreign firms in certain projects, and allowed the indigenous contractors to undertake those projects to build their capacity and enhance their track-records. In Singapore, joint venture was promoted as a means of facilitating technology transfer to the local construction firms. Also financial assistance in the form of Advance Mobilisation was used as a strategy in Sri Lanka and Thailand to develop local contractors, whereas, in Ghana a dedicated bank was set-up to support contractors in the form of pre-financing loans and hire-purchase schemes for plant and equipment. Additionally in Tanzania, Bairi (2005) report that Construction Industry Development Board set-up Contractors Assistance Fund with the objective of supporting small contractors by providing bid bonds and advance payment guarantees.

But even with the relative success of contractor development programmes, in most countries they failed mainly due to the wholesale adoption, which did not consider each country as a separate entity with peculiar problems, resource endowments and operating conditions (Ofori, 1999).

2.4 SME DEVELOPMENT INITIATIVES IN GHANA

Ghana has witnessed a range of pro-SMEs programmes. The governmental policies have been the source of SMEs promotion in all over the world (Altenburg and Eckhardt 2006; Feeney and Riding, 1997). It is therefore not surprising that most of the SMEs promotion interventions in Ghana have come from the state. In the study entitled ‘Small

Business Financing Initiatives in Ghana', Abor and Biekpe (2006) highlight a number SMEs promotion policy intervention that has been implemented in Ghana.

They tracedSMEs development initiatives in Ghana from 1970's and this led to the setting-up of bodies dedicated to support SMEs such as Office of Business Promotion and Ghana Enterprise Development Commission (GEDC). The GEDC was set-up to encourage Ghanaian entrepreneurs to venture into the sectors dominated by foreigners. The 1980's also saw other interventions such as National Board for Small Scale Industries (NBSSI), Ghana Appropriate Technology Industrial Service (GRATIS), Intermediate Technology Transfer Units (ITTUs) and Fund for Small and Medium Enterprises Development (FUSMED). The mandates of these organisations are that: NBSSI to train and assist persons with entrepreneurial abilities into self-employment, through its Entrepreneurial Development Programme; GRATIS to support small-scale and informal industries at the grass root level through transfers of appropriate technology; ITTUs to improve engineering skills of small-scale manufacturing and service industries engaged in vehicle repairs; FUSMED to make credit available to SMEs through commercial and development banks.

Abor and Biekpe (2006) concluded that despite all these interventions coupled with technical support from development partners the SMEs are still facing challenges particularly financed.

2.5 MEASURES TO PROMOTE SMEs

There are different views on the pro-SMEs policy interventions. The three main argument advanced by the proponents for supporting SMEs are that: SME development

increases employment more than large firms; SMEs boost competition; and SMEs are more productive than large firms (Beck and Demirguc-Kunt, 2005). Generally, SME support can be seen as poverty alleviation policy because most of the SMEs operate in semi-urban and rural areas in the developing countries. Therefore it is not surprising that globally the initiatives to promote SMEs have mainly come from governments (Altenburg and Eckhart, 2006; Schwartz and Bar-El, 2004). Such support comes in many forms such as: financial support policies; policies on marketing; technology and innovation policies; human resources development policies; policies on taxes; policies on supportive regulations and many other more to make them sustainable and economical.

Table 2.2 Measures to Promote SMEs

Promotion of subcontracting between domestic and foreign industries	Supporting sales, cash flows and working capital
Helping SMEs to maintain their investment level	Improving SMEs' access to finance and credit for feasible SMEs
Offering regulatory advice to SMEs	Supporting technical services
Providing tax breaks for SMEs	Provision of financial supports
Removing all needless bureaucratic procedures	Promotion of technological development for SMEs
Providing more information	Market access
Eradicating corruption	Provision of Infrastructure
Promotion of product development	Promoting education and training

Source: (OECD 2009; UNDP, 2004; Hussain, 2000)

2.6 SMEs IN THE CONTEXT OF THE CONSTRUCTION INDUSTRY

Defining SMEs is challenging, for the simple reason that there is no single settled definition (Abor and Quartey, 2010; Kayanula and Quartey, 2000). The definitions differ in terms of the type of the industry and the level of the economy development of a nation. Similarly, just as there is no unanimity in defining SMEs in general; the same

applies to the construction industry. Kamal and Flanagan (2014) describe SME Construction as an enterprise with the number of full time employees fewer than 200 people. According to Sibanda, (1999) a firm with inadequate resources and for that reason requires assistance to manage a business can be classified as a SME Construction firm. UNCHS (1996) also describes SME Construction as the only firms willing and able to undertake the small, scattered projects, especially in rural areas. Egemen and Mohamed (2007) suggest that a small scale contractor can be classified by their annual turnover. The above description by various authors amply shows that there is a lack of unanimity in determining what constitute a small and medium construction business.

Notwithstanding Eyiah and Cook (2003) refer to financial class 2, 3 and 4 per Ministry of Water Resources, Works and Housing financial classification as small and medium-scale contractors in Ghana. Even though class 2, 3 and 4 contractors are different, in terms on financial capacities; Eyiah and Cook (2003) explain that they share similar characteristics relative to their business management. The financial class 2, 3 and 4 can undertake government funded project not exceeding US$ 500,000.00, US$ 200,000.00 and US$ 75,000.00 respectively. It is therefore an appropriate for Amoah et al (2011) to describe mall-scale building contractors as those belonging to financial class-3 and class-4. Nonetheless in order to reduce the level of variability, it was decided that those in financial class-3 was adopted and subsequently classified as small-scale contractors henceforth for the study.

2.6.1 Justification for Promoting SMEsConstruction Contractors

The Organization for Economic Co-operation and Development (OECD) has underscored the need to develop all SMEs around the globe. According to OECD (2005) it is important for SME sector in every country to be supported to participate and gain from trade and investment opportunities. Promoting the small-scale contractors has the prospective to stimulate economic growth, reduce unemployment, reducing poverty, and improve living standards in rural areas. According to Kangasharju (2000) the employment record of SMEs would improve, instead of failing, if they could be assisted to reach a steady growth path.

SME Contractors find it extremely difficult to compete with the large-scale contractors in all spheres of their operations. A survey by the Federation of Master Builders (FMB) of UK in March and April 2013 discovered that 41% of constructions SMEs are only successful 10% of the time or large enterprises when bidding for public sector contracts. More to this, the SMEs contractors form the majority of contracting firms. In United Kingdom SMEs accounts for approximately 40% of GDP (Robbins et al, 2000); 94% in Australia (Thorpe and Ryan, 2006); 90% in Malaysia (Kamal and Flanagan, 2014); 94% in Tanzania (Mushi, 2007) and 95% of building firms Ghana, (Amoah et al., 2011). It is therefore safe to conclude that they are the base and engine of growth for the development of the construction industry in developing countries.

The SMEs have the prospect to develop into large companies if they are supported by the government policy. For this reason, it has been argued that the SME Contractors should be given the chance by contractor development programmes to both grow and mature (Kirmani, 1988). Consequently, there is unanimity among the industry players

that this group of firms need to be assisted in order to improve their effective participation in the construction industry (Eyiah, 2004). It is against this background that Dlungwana and Rwelamila (2004) argue for focussed development programmes that entail the provision of support to contractors in developing their skills, knowledge and competencies. Miles and Ward (1991) according to Eyiah (2004) justifies that small contractors are: potent creators of income and employment; agent of development in rural communities; and could be developed to become large-scale national companies.

2.6.2 Challenges Faced by SMEs Construction Contractors

Sexton and Barret (2003) suggest that the constraints of construction SMEs Contractors are similar to manufacturing SMEs. The challenges faced by SMEs Contractors according to Ofori (2009) include: access to market information; work opportunities; access to finance and other resources; opportunities to develop technical and managerial capabilities and opportunities to form mutually beneficial networks with potential business partners within the industry.

In Burkina Faso, Tokuori (2010) undertook a study into the possible obstacles impeding the growth of construction SMEs and founds: bribing and corruption; delay of payments; difficulties in establishing business; extremely administrative tender process; insufficient availability to financial services; competition from foreign contractors; high factor cost affecting the business operation; weak professional and construction business associations; absence of capable engineers and construction-related equipment and absence of professional advice by governmental/non-governmental bodies

In their study into the challenges confronting Mozambique local construction firms, Nhabinde et al (2012) identify; lack of modern technology; inadequate government procurement codes; policy and institutional fragmentation; limited access to credit; delays and bureaucratic barriers for import of raw materials; lack of qualified manpower; credibility associated to their age.

Thwala and Mvubu (2009) also suggest that the high failure rate among SME Building Contractors in Swaziland is attributed to: lack of adequate capacity; complexity and risks in contracting; lack of effective management; lack of business management; poor record keeping; inadequate technical skills; financial and contract managerial skills. According to the study, the majority of the respondents were displeased with the level of support given by the government.

Contractors Registration Board (2007) argue that work opportunity, biased competition, finance difficulties, late payments, lack of working capital, high taxes, equipment difficulties, construction material problems, management problems and lack of conducive procurement processes are the challenges confronting Tanzania contracting firms, whereas in the neighbouring Uganda Katende et al (2013) find the 5-topmost factors hindering development of construction industry in Uganda as: financial capacity; inadequate research and development; economics; corruption; and political interference.

In Ghana the challenges confronting small-scale contractors can be classified into technical, managerial, and financial constraints (Orhin, 2014) while Amoah et al (2011) suggest that the lack of performance seen among the SSBCs is due to fiscal policies and

managerial capacity. From the above discussions it is clear that with the exception of other challenges that can be linked to a state or governmental policies, all other challenges are direct results of inadequate technological skills, financial constraints and poor managerial ability (Wickramansinghe and Sharma, 2005).The challenges faced by indigenous contractors in Nigeria (Table 2.3).

Table 2:3 Challenges faced by Indigenous Contractors in Nigeria

Lack of vision	Unfavourable business environment
Lack of entrepreneurial skills	Lack of enabling government policies
Limited technical expertise	Lack of government patronage
Limited plant and equipment	Patronage of foreign firms
Limited finance	Weak economy
Lack of track records	Obtaining Interim Payment
Limited trained manpower	Access to Capital
Limited managerial expertise	Corruption
Providing Reliable Tenders	Fluctuating work load
Materials Control on Site	Inadequacy of local material
Company Organisation	Over dependence on imports
Meeting Contract Deadlines	Design Changes
Personnel Management	Resolving Contract Disputes
Providing Quality Workmanship	Public Image
Technical Know-How	Supplies and Prices of Materials

Source: (Adams, 1997; Bala et al., 2009)

2.6.3 Measures Required to Develop SMEs Construction Contractors

The needs-assessment of a beneficiary is the first phase of every capacity-building process. The needs-assessment helps to diagnose the root of the capacity-challenges confronting the beneficiaries. Any capacity-building assistance offered depends on the needs-assessment of the beneficiary.FAO (2006) describes the capacity-building needs as a gap between ‘what is’ and ‘what should be’. It further contends that the ability to identify the capacity-needs assist the decision-makers to understand the likely range of actions that they need to be taken to achieve the desired results. Thus, capacity-building

needs-assessment helps to identify what needs are required; how to address the needs; and who to address the needs.

In the context of SSBCs, capacity-building needs include any measures that tend to address their challenges. Such measures may include: training; financial assistance; professional development; mentoring; creation of opportunities; technical assistance; targeted procurement; sub-contracting; technology transfer; mentoring; technical assistance; foreign direct investment; business linkages; clustering; institutional support and enactment of supportive legal framework.In order to develop local contractors key measures should be employed (Table 2.4)

Table 2.4 Measures Essential to the Growth of Local Firms in Nigeria

Creating favourable business environment	Technology acquisition and transfers
Increased government patronage	Strategic planning
Government policies and support	Improving access to loans
Upgrading the managerial expertise	Tender preference to local firms
Provision of long term loans	Reservation of contracts
Creating marketing strategies	Increasing production capabilities
Hiring and training of top professional	Upgrading technical expertise
Enhancing product quality	Research and development
Improving access to plant and equipment	Reduction of taxes by government
Employing more professional	Continuous workflow

Source: Bala et al., (2009)

2.7 PROCUREMENT IN THE CONTEXT OF CONSTRUCTION INDUSTRY

There is not a single way of defining procurement in the context of construction works (McDermott, 1999). Mathonsi and Thwala (2012) state that "Procurement method" is a contemporary term, which is known to many practitioners and researchers of the construction industry by different terms; these include terms such as "project approach", " procurement systems", "procurement delivery methods" or "project delivery systems", etc. But, in the context of construction works 'Procurement Method', 'Procurement Path', 'Contractual Arrangements' 'Procurement Form and 'Procurement Systems' are often been used interchangeable (Dissanayaka, 1998).

Lenard and Moshini (1998) define procurement as 'a strategy to satisfy the client's development and/or operational needs with respect to the provision of constructed facilities or a discrete life cycle', Procurement therefore seeks to assign the role, accountability and responsibility, thus, determines the relationships that must exist among the project participants.

2.7.1 Types of Procurement Systems

There is a plethora of procurement systems available to meet the needs of clients (Davis et al., 2008). The failure of traditional procurement methods to address the needs of clients has brought about the alternative or non-conventional form of procurement. Therefore, the emergence of alternative form of procurement is an attempt to address the deficiencies of the traditional procurement method.

Miller et al (2009) classify procurement systems into: traditional (separated); design and construct (integrated); management (packaged) and collaborative (relational).Whilst

Mastermann (2002) classifies procurement systems into: separated and cooperative system; integrated system and management-oriented system. According to Smith et al (2004) procurement methods have been classified around three distinct activities such as: traditional systems, design and build systems and management-oriented systems. Franks (1998) opines that the main procurement routes for buildings can be classified according to: Designer-led competitive tender system (the traditional system); Designer-led construction managed for a fee (management contracting and construction management); Package deals (package deal turnkey; design and build; design, build, finance and operate/private finance initiative) and Partnering. Mante et al (2010) therefore suggest that the following procurement methods can be identified from various classifications is: the traditional methods; the integrated approaches; the management orientated methods; and the collaborative/relationship-based procurement methods.

In spite of the short coming associated with the traditional method it is frequently selected as a primary procurement method. According to Morledge et al., (2006) it could be due to the lack of knowledge by the decision makers on the procurement methods available.

2.7.2 The Effects of Procurement Methods

The choice of the procurement system is very important to the attainment of project objectives. Thus, the selection of suitable method is crucial to construction projects' success. But studies also show that these objectives are not always met. The failure to attain project objectives cannot be attributed only to procurement system but many factors. For instance general economic condition in a country can have influence on the

outcome of a project. Many researchers argue that management decisions during the construction process are also the causes of performance rather than the procurement method. According to Love (2002) there is no substantial difference in cost-performance of various procurement methods, but Gordon (1994) believes that a suitable procurement method could lead to the savings of construction project costs by an average of 5%.

Dissanayaka (1998) suggests that factors such as management related, project and client related, designer related and contractor related factors are more linked with project performance than the procurement system. Other external factor such as: cultural, economic, political, social, physical, aesthetic, technology, financial, legal and institution have bearing on the project performance (Dissanayaka, 1998), he suggested that alternative procurement systems appear to perform better than the traditional procurement systems in some aspects. Miller et al (2009) analyse the performance of major procurement systems relative to cost, quality and time and finds the following results.

- Traditional (Separated) system; benefits of cost and quality but at the expense of time;
- Design and Build (Integrated) system; benefits of cost and time but at the expense of quality; and
- Management (Packaged) system; benefits of time and quality but at the expense of cost

Walker (1996) suggests that the quality of the collaboration among the project participants has a major significant factor governing construction time performance.

Therefore, any procurement method that promotes collaboration among the projects participants leads to early completion of the project. Conflict or dispute is one phenomenon which is very common in the construction industry due to the fragmentation and competing interest of the various participants. But the frequency of this incidence depends on the procurement system. Conlin et al. (1996) discover that the projects that use traditional procurement methods experienced higher disputes in budget and payment, performance, delay and time related matters, whilst the clients that use design and build procurement method experienced little or no disputes (Ndekugri and Turner, 1994).

For every project there is a setting level of risk associated it and the apportionment of the risk is dependent on the procurement route adopted. According to Miller et al (2009) the contractor carries the greater risk for design and construction procurement, but the client assumes a greater for the management forms of procurement. But with the traditional lump sum, though there is intent to share the risk fairly, the contractor assumes the greater the risk.

Waste generation as a result of construction activities has attracted a lot of interest among the practitioners in the industry. The waste is attributed to sources include design, procurement, material handling, operation and others. Jaques (2000) reveals that alternative procurement method performs better than traditional procurement method in reducing waste generation.

2.8.0 MANAGEMENT CONTRACTING PROCUREMENT SYSTEM (MCPS)

Management Contracting is a variant of management oriented procurement method. In the ‘management oriented’ procurement system the management contractor team up

with the client independent professional team to produce the design and manage the physical operations that are carried out by sub-contractor (Masterman, 2002; Davis et al., 2008); and serves as a construction consultant to the client's team by providing information on the buildability of the designs. The management contractor provides the management expertise through the whole building process and is paid a fee by the client (Morledge et al. 2006); the fee paid comprises a percentage for profit and fixed overheads. For that reason many authors have even criticised management contractor duty as the duplication of job.

Management Contractor and the client are expected to play a key part if project objectives are to be realised in management contracting procurement system, and this depends on trust and good rapport among the project participants (Miller et al., 2009) and outline the advantages and disadvantages of management contracting procurement system (Table 2.5)

Table 2.5 Advantages and disadvantages of MCPS

Advantages	*Disadvantages*
The client deals with only one firm, which enables improved coordination and collaboration among the project participants	Price certainty is not achieved until the final works package has been let
Flexibility for changes in design	Informed and proactive client is required
Potential for time savings for the overall project as design and construction activities are overlapped	Client must provide a good quality brief to the design team as the design will not be complete until resources have been committed to the project
Works packages can be let competitively at prices that are current	Poor price certainty
Improved constructability through constructor input into the design	Close time and information control required
Roles, risks and responsibilities for all parties are clear	Client loses direct control of design quality which is influenced by the contractors

Source: Miller et al (2009)

The analysis of the merits and demerits of Management Contracting Procurement System suggest that it is suitable in circumstances such as:

- When time is of the essence, thus, early start and completion of the project is required;
- Where the client is ready to take major financial risk;
- Where the contractor's input is required at design phase;
- Where the size of the project is fairly large; and
- Where the project is complex in nature, thus, requires specialist contractors.

According to Chartered Institute of Building (CIOB) (2014) management contracting is characterised by:

- The design and documentation is done by the consultants just as traditional procurement method;
- The management contractor is hired by the client under a management contract; He does not undertake the work himself. he is engaged to manage the work of the trade contractors;
- The management contractor enters into trade contracts with numerous trade contractors who actually do the work; and
- Management contractor is not responsible for the default of the sub-contractor he is more like a consultant as he has very little risk, having "outsourced" his labour force, plant and machinery.

2.8.1 Responsibilities of a Management Contractor (MC)

CIOB (2014) stress that MC is responsible to manage and carry out of the work through sub-contractor or specialist contractors, thus assumes full responsibility for the control of the work on site. The MC manages and co-ordinates the work packages to individual sub-contractor, and provides on the site service, plant and equipment, facilities etc. for the work. MC is responsible for the provision of site accommodation for which he will be reimbursed either at cost or as a laid down lump sum in the tender document.

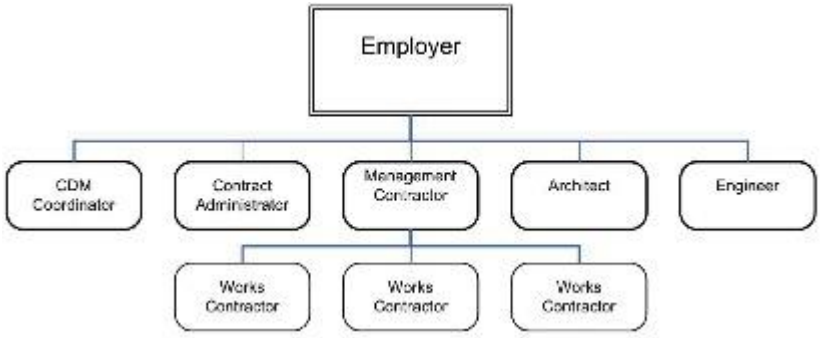

Fig. 2.1 Contractual structure of the management contracting procurement system

Source: Glover (2014)

The other services according to CIOB (2014) that may be provided by management contractor include but not limited to: advising on the development of the brief; defining key performance indicators for works contractors; acting as the principal contractor; coordinating and release of information; managing and co-ordinating works; coordinating the work of statutory undertakers; coordinating setting out; arranging for site accommodation and services; advising on the feasibility and buildability; preparing a construction programme; defining methods of working on site; offering works contracts and managing the site.

2.8.2 Obstacles to Management Contracting Procurement

There are a number of potential barriers to the implementation of non-traditional procurement systems despite their better performance as compared to the traditional procurement inthe construction industry (Miller et al, 2009); which is attributed to the conservative nature of the construction industry (Winch, 2003).

Kyei (2011) finds management contracting procurement as one of the least known procurement in Ghana. Kyei (2012) evaluated the respondents' knowledge on five procurement systems in Ghana and found management contracting as the least known procurement system only ahead of turnkey procurement. Teo and Ofori (1999) find the three most influential factors hindering the use of management contracting as: limited understanding by practitioners; management contractors' ability to satisfy client interest and absence of standard condition of contract. The other barriers identified by the study include unfamiliarity with MCPS; fear of contractual disputes; scarcity of managerial personnel; lack of confidence in management contracting; and the relative cost of management contracting. Komu et al (2012) also identify the absence of regulatory framework; lack of qualified management contractor; absence of suitable project for management contracting and lack of standard management contracting practice.

2.8.3 Measures to promote Management Contracting Procurement System

Egan (1998) suggest that the main driving force of promoting alternative procurement forms of procurement among others things include steadfast leadership and project team integration. Miller et al (2009) opine that in most of the times the client control the particular procurement path to use, but the contractors and consultants can play significance influence of the choice of procurement method by the clients. According to

ACEA (2008) cited by Miller et al (2009) suggest that in most situations the clients are considered to be ignorant of the procurement methods available to choose from. This presents opportunity to the professionals to select the appropriate procurement; butthe professionals in most cases are reluctant to try other forms of procurement (Shields, 2005). It is clear therefore that most innovations in procurement can emanate from the professionals.

MCPS has shown the potential of contributing towards the development SMEs (Komu et al, 2012; Bairi, 2005; Bentall et al. 1999); but the level of practice in the industry is still low (Teo and Ofori 1999). The literature survey reveals that not many studies have investigated the driving factors of management contracting procurement. According to Komu et al (2012) MCPS could be promoted by developing regulatory framework and revision of existing rules and documents to accommodate the use of management contracting procurement and other non-convectional procurement arrangements. Teo and Ofori (1999) also suggest the introduction of MCPS by CIBD, invitation of management contractors to lead seminar on MCPS, education of professional on MCPS and publication of successful management contracting projects.

2.8.4 Management Contracting Procurement towards the Development SSBCs

The capacity enhancement of SSBCs can be attained through the sub-contracting arrangement with themanagement contractors. In the strictest term the responsibility of a management contractor is to see to it that the trade contractors or sub-contractors work according to conditions of contract. However, the proposition of this study is that if it is well managed, and the management contractor is appropriately incentivised, a MCPS will have a positive impact on the development of SSBCs who work as sub-contractors.

In the manufacturing sector the sub-contracting relationships between the large enterprises and SMEs have assisted the SMEs to obtain assistance in the form of product-related; production process-related; organisational know-how; marketing assistance; human resource assistance and financial assistance (UNTAD, 2001).Similarly, in the building construction industry such strategy can be adapted through management contracting to improve the capacities of SMEs Contractors. The benefits of MCPS are many, especially for SSBCs. Sub-contracting under management contractor is an efficient approach to address specific needs of SSBCs through a supervision; provision of job opportunities; provision of financial assistance; loaning of equipment; and provision of management services. These would have positive impact on the SSBCs in many ways such as: improved credit-rating; builds of track-record; enhanced their technical/management skills; improve the accessibility to modern technology; and provide the income opportunities.

Bairi (2005) asserts that management contracting arrangement has contributed to the development of local contracting firms. According to Komu et al, (2012) andBairi(2005) the local firms engaged in the sub-contracting relationship with the foreign construction firms have seen their capacity enhanced over the years; and it is a development model worth pursuing (Bairi, 2005). Bentall et al. (1999) caution it would only be useful development model only if the management contractor is motivated adequately to include training and development elements in the contract. He further stressed that contracting agency should ensure that the foreign contractors (management contractors) freely incorporate such elements in the contract or specify in the tender that such elements are part of the contract.

2.8.5 Contextual Meaning of Management Contracting

For the purpose of this study, a management contractor is described as a fairly large and experienced contractor who is appointed through a competitive selection by a client to manage and co-ordinates a number of sub-contractors (small-sized contractors) on project with the objective to help and develop the capabilities of the small-scale building contractors. A management contracting can be undertaken by suitable experienced firms that above all have the skills and technology to give high level of supervision over the small-scale building contractors as the sub-contractors.

In this context a management contractor would provide high level of supervision and other services that would assist the small-scale building contractors to perform just as it pertains in the manufacturing sector. The levels of supports offer by the management contractor to small-scale building contractors would be assessed by making available certain equipment; supervision; financial support and technical support to small-scale contractors. The enhanced capabilities of the small-scale contractors would be measure by quality of workmanship, ability to perform within cost and time, and demonstration of safety principles.

2.9 SUB-CONTRACTING RELATIONSHIP

Hayashi (2002) describes sub-contracting as a form of business deal in which one party (parent firms) commissions another party (sub-contractor) to provide services or product by the former. In the construction industry sub-contractors can be found in many specialists such as plumbers, electricians, framers, and concrete workers.

According to Taymaz (2004) there are three divergent economic views on the analysis of subcontracting relationship.

These are ‘dualistic economists approach’, ‘cluster approach’ and ‘developmental economists approach’. According to the “dualistic economy” approach sub-contracting is seen as an ‘unequal power relationship’ between large enterprises and SMEs, thus with intention to off load their risk to the SMEs**.** The‘cluster approach’ proposed that because of the common problems of all the SMEs networking among themselves they would be in better position to support each other, hence equal relationship. In the view of the ‘development economics’ proponents though there is ‘unequal power relationship’between large enterprises and SMEs, sub-contracting can offer opportunity for both large enterprises and SMEs, accordingly helping to address the capabilities problems include financial, technological and managerial inadequacies.

Under management contracting arrangement the actual construction work is carried out by work-package contractors or sub-contractor selected by the management contractor in consultation with the client and his professional advisers. Thus, sub-contracting forms very critical components of management contracting arrangement and plays a significant role in the successful delivery of projects. Under management contracting procurement sub-contractors are supervised and co-ordinated by the management contractor to undertake the construction works. Upon the premise of ‘development economics’ approach that the study is proposing that management contracting if is well structured would contribute to the transformation of small-contractors building contractors.

2.9.1Sub-Contracting Relationship and SMEsDevelopment

Morcos(2003) explain that there are two main forms of production sub-contracting. These are capacity sub-contracting and specialisation (complementary) sub-contracting. According to the author capacity sub-contracting usually entered into in situations where the main contractor (parent company) does not have enough capacity to carry out the whole work and for that reason a percentage of the work is sublet to other firm (sub-contractor). He further explained that the specialisation sub-contracting is adopted in circumstances where the parent company depend on upon the services of a specialised subcontractor to provide a part or component, hence complementary relationship.

Subcontracting relationship between large enterprise and SMEs plays significant role in terms of financial support, technical assistance and human resources development to the SMEs. For instance Wattanapruttipaisan (2002) propose that sub-contracting and other joint supply relationships with the large enterprise facilitatesand cut down the time period for the capacity-building of SMEs, as deficiency in technology, unavailability of capital and sustained market has long been among the several major challenges and barriers facing most SMEs. According to Berry (1997) one of the main reasons for the success of SME is the valuable linkages between large enterprises and SMEs through sub-contracting arrangements; asit provides the necessary resources support and allocation to the SMEs (Wong, 1997).

Empirical studies have also shown that there is correlation between sub-contracting and transformation of SMEs (Deardorff and Djankov, 2000; Kumar and Subrahmanya, 2007). Wong (1997)argues that if the sub-contracting practice is eliminated in the construction industry, it will have negative impact on the employment, as 80%-90%of

works are performed by sub-contractors on construction projects. Sudhir (2010) suggest that SMEs with inadequate human and financial capabilities are able to overcome these challenges via the mutual linkages with the large enterprises.Yong (2011) conclude that lessons from sub-contracting arrangement between transnational companies and local contractors can influence the capacity building in local SMEs.Taymaz (2004) propose that the role of sub-contracting to SMEs development can be seen in two forms, that is, sub-contracted inputs (sub-contract offering firms), and the sub-contracted output (subcontract receiving firms). Hence, management contractor is sub-contract offering firm (sub-contracted inputs) as SSBCs are the subcontract receiving firms (sub-contracted output). Sub-contracting relationship between large enterprises' and SMEs has provided specific benefits to SMEs (Table 2.6)

Table 2.6 Benefits of sub-contracting to SMEs

Acquisition of knowledge	Upgrading of technical skills
Technology transfer	Mentoring
Access to financing	Business management skills
Loaning of specific tools and equipment	Ready market
Management advice (operations, financial management, quality management)	Inventory management
Better or regular payment	Development of core competencies SMEs

Source: (Kumar and Subrahmanya, 2007; Ruffing, 2006;Hayashi, 2002; Reeves, 2002; UNTAD, 2001)

Above literature survey gives sufficient evidence that sub-contracting relationship or external support is essential if the SMEs are to develop their capabilities, and in turn enable them to perform better.

Whilst there are numerous positives associated with sub-contracting arrangement, it also poses some challenges to the client, principal contractor and the sub-contractor. Money is described as the life-blood of the construction industry, but delayed-payment is one of the characteristics of sub-contracting relationship (Wilson et al, 1996). Again an under-performed sub-contractor in the course of the work will have cascading effect on the other sub-contractor and the whole project as delay of most construction projects globally are sub-contractor related problems (Chiang, 2009). In order to reduce the problems associated with the sub-contractors many studies have been conducted on criteria to select suitable sub-contractors (Thomas Ng et al, 2003).

2.10 PUBLIC PROCUREMENT AND DEVELOPMENT OF SMEs

Arrowsmith (2003) asserts that if it is properly utilised, procurement has the capacity to transform the economies. Given the substantial amount of money spent on public procurement across the globe, access to government procurement would have significant positive impact on the operations of SME business, especially in the developing countries where the government is the major spending entity. Mansour, (2012) reports that procurement is being used as a policy tool to foster technologytransfer in Malaysia. According to Mansour, (2012)this is achieved through joint venture with the local contractors. Similarly, in South Africa public sector procurement has been used to address the skewed racial ownership patterns and to provide economic opportunities to the under-privilege(Watermeyer, 2000).Watermeyer explained that ‘Targeted Procurement’ has been used as a policy instrument to correct economic imbalances caused by ‘Apartheid System’. Therefore, one way by which the

SMEs could be helped to build their capacities is through targeted or specific procurement method.

In United States for instance, setting up of Small Business Administration is aimed at to regulate policies to increase the small businesses involvement in US federal government procurement. Among other things the policy specifies that certain range of contract sum should be set aside for small businesses and more importantly promoting of sub-contracting as a strategy to develop small businesses. The policy requires that large enterprises that bid for and win contract above certain contract sum should submit sub-contracting plan. The use of procurement as a development policy instrument comes with an additional cost. But according to Egyptian Ministry of Foreign Trade (2002) even in developed nations, such strategy to support SMEs has been proven to be a difficult and expensive process. But the ministry argued that analysis of such cost should not exclude the fact that the social gains and benefits for both government and SMEs outweigh any considerations. Learning from a few but such useful examples should convince policy makers in Ghana that it is possible to use procurement as an economic policy instrument to develop SMEs in general and small-size contractors in Ghana.

SUMMARY

The chapter highlighted the pertinent literature that underpinned this study. The literature makes a case for the use of management contracting procurement in transforming the capacities of small-scale building contractors. A summary of the findings from the literature are follows:

- Small-scale contractors some level of need support in other to develop their capacities
- Procurement systems have positive impact on the development of SMEs.
- Management Contracting Procurement System is not widely researched in Ghana.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the method adopted with its justification towards the attainment of the aim of this study. It gives the detailed account of where the study was done, how it was done' who took part, why those respondents were chosen and what was done with data collected.

3.2 RATIONALE AND CHOICE OFLOCAL GOVERNMENT AUTHORITIES (METROPOLITAN/MUNICIPAL/DISTRICT ASSEMBLIES, MMDAs)

This study aimed at exploring a strategy to develop small-scale contractors that makes it imperative to consider their input and interest above all other interest. However, in the Ghanaian construction industry there are no reliable data on the small-scale (Agyekum, 2012); and it is largely due to the fact that the SSBCs are not professional builders (Amoah et al, 2011). In view of this a preliminary study was undertaken to identify 'active and willing' SSBCs and was found that getting the respondents (SSBCs, consultants and private clients) where all of the three have had encounter was very challenging. Consequently, a different approach was adopted. For instance the private clients were replaced with public clients (selected district assemblies). The MMDAs Engineers (MMDAEs) assistancewas sought to identify other respondents and administer the questionnaires on my behalf and the strategy worked well.

It was then realised that using the assemblies through the MMDAEs due to their working relationship with the other respondents would be a useful approach. Couple

withmotivation that local government authorities are the main public employers of small and medium sized contractors(Thwala and Mvubu, 2009; Musingi, 2007). Fobi (2014) reveals that majority of contractors registered with the various assemblies are those in the financial class of D3K3. The assemblies are responsible for the provision of basic infrastructure at the local government level. For example, section 10 (3) of the Local Government Act (Act 462) of Ghana states among other things that MMDAs are responsible for the provision of basic infrastructure development, improvement and management of human settlements and the environment at the district. In the pursuant of their mandate, the local assemblies are required to provide basic infrastructural projects such as; classroom blocks, markets, health facilities, toilets and waterworks, accordingly engaging the SSBCs for their services, hence, the major public employer of D3K3 financial class contractors.

3.3 RESEARCH DESIGN

Kothari (2004) describes research design as a framework within which research is conducted. The research design constitutes the outline for the gathering, measurement and examination of data. It is described as the logical procedures that assist the researcher to test hypotheses. This logical procedure connects the empirical data produced by research to the initial research objectives of the study, and ultimately to its conclusions (Yin, 1994). According to Saunders et al., (2009) research design provides a basis for the researcher assessor to ask why one chooses to conduct a study in a particular organisation; a particular department; and why you chose to talk to particular group or person.

Saunders et al (2009) posit that a research approach can be viewed as either deductive or inductive. According to the authors the deductive approach can also be described as 'theory testing' because the investigator develops a theory and devise a strategy to test the formulated theory, whereas the inductive approach is can also be described as a 'theory building' since the investigator collects data in an effort to develop a theory.

Similarly, Kothari (2004) describes two fundamental approaches to research as qualitative and quantitative methods. He differentiates between the qualitative and quantitative research arguing that quantitative involves the gathering of quantitative data which is subjected to rigorous quantitative analysis in a formal and rigid manner, while qualitativeapproach to research is concerned with subjective assessment of attitudes, opinions andbehavior which is not subjected to rigorous quantitative analysis.

Consequently, Harwell (2011) suggests that quantitative and deductive approaches are similar; because quantitative is deductive in nature, since general inferences are made about characteristics of a population. Saunders et al (2009) further elucidate that in the deductive approach the data collected are of quantitative in character whiles in the inductive the data collected are of qualitativein nature. Kothari (2004) also further explains that there are three classes of quantitative approach. These are inferential, experimental and simulation approaches. He describes the rationale of inferential approach to research as a means of generating a data base from which inferences can be made about a population, for this reason the study adopted inferential approach. Accordingly, a quantitative research approach was used whose main focus was an attempt to achieve statistical results and generalise the findings.

Saunders et al. (2009) explain further that the research philosophy one adopts hold certain important assumptions about the way in which one views the world. These assumptions will support one research strategy and the methods one chooses as part of that strategy.Saunders et al. (2009) argues that in every study one must have reasonable justification for the choice of research design. The justification according to the authors should always be based on your research question(s) and objectives as well as being consistent with your research philosophy. They ascribed that deductive approach is lean towards positivism research philosophy and inductive is linked more to interpretivism research philosophy, hence positivism philosophy was adopted for the study.

3.4 TARGETED POPULATION

The condition of defining the population for a study arises from the need to specify the group to which the result of the study can be generalised. According to Naoum (1998) the two main considerations that need to be considered if choosing research population and sample are: what do you want to know and whom do you want to know? In order to attain the aim of the study clients, consultants, first class foreign contractors and SSBCs were selected. The MMDAEs represented the clients and the Project Officers represented first class foreign contractors. The rationale for the choice of the respondents was that: the SSBCs are the prime beneficiaries of the study; MMDAs are the major employer of the SSBCs; the Consultants are the advisors to the clients and professional in the industry; and foreign contracting firmscarry out the works on major infrastructural projects in Ghana (Vulink, 2004) and qualify to be considered as management contractors. Gyadu-Asiedu (2009) also explains that in the Ghanaian construction industry clients, consultants and contractorsare the major stakeholders.

Additionally, previous studies by Komu et al. (2012) and Teo and Ofori (1999) provide the basis for the choice of the respondents. In a comparable study by Komu et al. (2012) clients, consultants, large-contractors, regulatory body and SMEs were the respondents and clients, consultants and contractors were the respondents of Teo and Ofori (1999).

3.5 SAMPLING PROCEDURE

Kothari (2004) describes sampling technique as the process of selecting a sample size from a population and the sample size is number of items to be selected from the universe. Sampling techniques offer a choice of approaches that allows one to cut-down the amount of data one needs to gather (Saunders et al., 2009). Kothari (2004) outlines things to be considered in sampling procedure as: type of universe; sampling unit; source list; size of sample; parameters of interest; budgetary constraint; sampling procedure.

In designing a sample size there are two basic types of sampling; probability and non-probability (Saunders, 2009; Kothari, 2004). With probability samples each element has an equal chance of being included in the sample whilst the non-probability sampling does not allow the researcher to determine this equal chance. Saunders et al., (2009) postulate that probability sampling allows one to make statistical inferences about the population but non-probability allows only to generalise about the population, but not on statistical basis. They explain further that the main techniques one can use to select a probability sample are: simple random; systematic random; stratified random; cluster; and multi-stage, and the main techniques to select non-probability sample as: quota; snowball; convenience; purposive and self-selection.

In this study a mixture of probability and non-probability sampling techniques were used due to the nature of respondents required for the study. In the first instance ten project managers of first-class contractors and the MMDAs were chosen purposively (non-probability). Subsequently, a probability was used to determine the appropriate size of MMDAs required after which a simple random technique was used to select the assemblies, the consultants and the small-scale contractors to be surveyed.

Although, there are weaknesses associated with purposive sampling technique, it has been argued that the reason for using purposive sampling is to ensure that the sampling units selected have the required answers to the problems being investigated. Bernard (2006) explains that in purposive sampling, the investigator determines the purpose he wants respondents to serve and he goes out to find one. Per the criteria and the rationale given for the selection of assemblies necessitated the application of simple random and purposive sampling techniques.

3.5.1 Sample Size

The required number of MMDAs, consultants and SSBCsfor the study were determined by using a formula suggested by Israel (2009). The sample size determination is based on 216-assemblies in Ghana.

$n= N/ [1+N (e)^2]$, Given N = 216, and e = 0.05 for confidence level of 95%

$n= 216/ [1+216 (0.05)]^2$

n=216/1.54 =140.26, approximated to 140

Based on this figure, one-hundred forty (140) each of the MMDAEs, Consultants and SSBCs were targeted randomly from one-hundred forty MMDAs across the country and

thirty (30) project team members were targeted from ten purposively selected foreign contractors, thus bringing the targeted respondents to four hundred and fifty (450).

3.5.2 Sampling Criteria

Sampling criteria can be described as the parameters set-up by the researcher to determine the inclusion or exclusion of element for the participation in a study. The criteria used to select the respondents for this study were:

- ✓ Small-scale contractors (D3K3) who have had or have working relationship with the MMDAs;
- ✓ Metropolitan/Municipal/District Assemblies Engineers(MMDAEs);
- ✓ Consultants (architects, quantity surveyors and structural engineers) firms that have had or have working relationship with the MMDAs; and
- ✓ Project Officers of foreign contractors.

3.6 DESIGNING OF QUESTIONNAIRE

The cover page of the questionnaire used contained a preamble in the form of brief background to the topic; aim of the study; and brief explanation of management contracting procurement concept. Additionally, a contextual definition was given to the "operative words" at the beginning of each objective on the questionnaire so as to bring clarity to the meaning of each objective. But, the questions for the small-sized contractors were framed in the sentences form whereas those meant for otherrespondents was framed in phrases. All of these were done to ensure that time taken to answer the questionnaires is minimal in order to ensure better response rate due to the experience learnt from the preliminary study.

The primary data were obtained with closed-ended questionnaire as a result of the research approach adopted for the study. Saunders et al (2009**)** suggest that with closed-ended questions, the respondent is asked to select an answer from a number of alternative answers provided by the researcher. The authors argue that closed-ended questions are very popular because they provide a greater uniformity of responses and it is not difficult to process. Even though, Bryman (2007) postulates that this method of data collection suffers from poor response rate, but admit it helps to gather the views from a wide range of participants.

3.6.1 Structure of the Questionnaire

The structured questionnaire divided into five sections and a five point Likert scale response ratings was used.

Section one; this section contains general information about the respondents'. This section basically seeks to find from the respondents their academic, professional qualification and working experience.

Section two; it contains the capacity-building needs of small-scale contractors. The task was to find from the respondents' their views on measures required to enhance the capacities of SSBCs where: Highly unimportant=1, Unimportant=2, Neutral=3, Important=4 and Highly important=5.

Section three; the section deals with the possible benefits of MCPS towards the capacity building were divided into two parts. The task was to solicit the views of the respondents on the benefits of sub-contracting relationship under management

contracting where: Highly unimportant=1, Unimportant=2, Neutral=3, Important=4 and Highly important=5.

Section four; the section four is related to the potential implementation challenges of the strategy. The task was to seek the views of the respondents on the possible challenges to the implementation and they were asked to show the extent of their agreement or otherwise where: Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4 and strongly agree=5

Section five; the section also explored the measures required to promote the implementation of the strategy and the respondents were asked to expressed their opinion where: Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4 and strongly agree=5

3.6.2 The Administration Questionnaires

Bearing in mind the geographically locations of various MMDAs used for the study, a diverse strategieswere adopted for the administration of the questionnaires included electronic mails, postal services and hand-delivery methods. As stated earlier under section-3.1, the MMDAEs were used as intermediaries to administer most of the questionnaires. In situations where the postal method was used, each parcel sent contained three set of questionnaires, with a stamped self-addressed return envelope. The next step was to follow-up with phone calls. Such a technique was adopted with the intent to reduce non-response rate. Moreover, special arrangements were also made with the intermediaries for the return of the questionnaires. Eleven weeks

were taken to administer the questionnaires. Table 3.1 is summary of questionnaire administration

Table 3.1 Summary of questionnaire administration

Description of Respondents	**Distributed**	**Expected**	**Returned and used for Analysis**
D3K3	180	140	132
MMDAEs	180	140	132
Consultants	180	140	132
Project	30	30	20
Total		*450*	*416*

3.7 DATA ANALYSIS

The data collected was edited, coded and processed with Statistical Package for Social Sciences (SPSS) version 20. The data was described using tables and figures. The statistical tools used to analyse the data include mean score ranking, factor analysis (FA) and one-way ANOVA. To rank the factors fairly, where two or more factors have the same mean, the one with the lowest standard deviation was assigned the highest importance ranking (Field, 2005).

3.7.1 Mean Score

For a data set, the mean is the sum of the observations divided by the number of observations and it identifies the central location of the data.

$M=\sum(X)/N$, Where Σ= Sum of, X = Individual data points, N = Sample size, and for the purpose of this study any mean value ≥ 3.0 is interpreted as a significant.

3.7.2 Factor analysis

Data obtained for this objective was analysed using mean score ranking and factor analysis.Factor Analysis (FA) is a mathematical tool that can be employed to look at a wide range of data sets(Manzur and Nayeem, 2008), and its basic reason of factor analysis is to explore the underlying variance structure of a set of correlation coefficients. The authors further explained that the factor analysis is also useful; (i) to find the extent to which each original variable depends upon each common factor; (ii) to interpret the obtained factors; and (iii) to find the amount of each common factor possessed by each observation (the factor scores).

According to Field (2005) as a requirement for any factor analysis to be valid, the Kaiser-Meyer-Olkin(KMO) measure of sampling adequacy value should be at least 0.5, but hedescribed the values between 0.5 and 0.7 as mediocre, values between 0.7 and 0.8 as good, values between 0.8 and 0.9 as great and values above 0.9 as superb. Field (2005)further explained that Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix and for factor analysis to work one need some relationships between variables, and if the R-matrix were an identity matrix then all correlation coefficients would be zero. Therefore, if one wants a test to be significant (i.e. have a significance value less than 0.05). If a significant value is 0.000 it means that the null hypothesis of the correlation matrix being identical is rejected hence, there exist significant correlations in the data set that is appropriate for factor analysis.

Field (2005) further indicate that factor analysis values are better understood through rotation, byemphasising that rotation maximises the loading of each variable on one of the extracted factors whilst minimising the loading on all other factors. A variable

which emerge to have the highest loading in one component belongs to that component. Rotation works through changing the absolute values of the variables whilst keeping their differential values constant (Field, 2005).

3.7.3 Analysis of Variance(ANOVA)

Data for possible drivers were analysed using one-way analysis of variance (ANOVA) to determine if there any significant differences between the means of the respondents groups, i.e. MMDAEs, Consultants and the Project Officers. Howell (2007) describes one-way analysis of variance (ANOVA) as a statistical tool used to determine if there any significant differences between the means of three or more group. Howell explains that in calculating one-way ANOVA we calculate the F-statistic ratio which is the relationshipbetween the mean scores 'between the groups' and the mean scores 'within the groups' (That is, $MS_{between}/MS_{within}$).

SUMMARY

This chapter presented research methodology by the way of giving the detailed explanation of why, where, how, who, and what I did; the rationale for the choice of local government authorities; targeted population; sampling criteria; sampling procedure and sample size; the nature of questionnaire employed; administration of questionnaires; and the statistical tools used to analyse the data obtained from the survey.

CHAPTER FOUR

RESULTS AND DISCUSSIONS OF FINDINGS

4.1 INTRODUCTION

This chapter presents the results and discussion of the study. The results and the discussion follow just as the objectives of the study. It begins with the analysis of the demographics of the respondents. It continues by looking at the capacity-needs as perceive by all the respondents and also as perceive by each group of the respondents. It continues further by analysing each objective in similar manner, that is, examine the entire respondents then each group of the respondents' separately. Finally, it explains how the capacity- building framework was developed and how to implement the framework.

4.2 DEMOGRAPHICS OF THE RESPONDENTS

The demographics analysis in research is very useful as it gives certain amount of credibility and substance to the study. For instance ones educational level is useful in answering the questionnaires, crucial in understanding business regulation and it also opens opportunity for SSBCs as they think differently from other. The working experience is critical as it helps one to appreciate the nuances of the industry and what is actually pertaining in the industry. Similarly one professional background is one of the key to success in the industry as professional bodies exist to promote excellence by educating their members beyond academic qualification to promote standards. The results of the demographics of the respondentsshowed range of educational level, working experience and different professional background (Table 4.1).

4.2.1 Educational Level of the Respondents

Generally the level of education has influence on ones potential hence the educational background of the respondents were analysed as ithas positive impact on development of firms (King and McGrath, 2002).The MMDAEs surveyed 6.8% have HND, 84% have Bachelors and 9.2% have masters. In the case of consultants 54.5% are Bachelors holders, 28.8% have Post-Graduate Diploma and 16.7% have Masters Degree whereas the PMs, 50% are Bachelors holders, 30% and 20% are Post-Graduate Diplomaand Masters Degree holders respectively. The SSBCs surveyed 3.8% have HND, 69% have various secondary school educational background and 27.2% have either Middle School or Junior High School educational background. The result reveals that comparatively, the educational backgrounds of the SSBCs are "very low" (Table 4.1).

4.2.3 Professional Background of the Respondents

Bowen et al (2009) suggest the belonging to professional bodies demonstrates ones seriousness about the business one does. Especially for the SSBCs as they share experiences and ideas about their businesses. On the professional background of the MMDAEs, 3% belong to GHIE, 4.7% belong to GHIS, 16.7% are GIOC members and 75.6% belong to IET. On the part of the consultants 27.3% were GIA members, 18.9% GHIE members, whereas 31% and 22.8% belong to GHIS and GIOC respectively. Also 45% of the PMs belong to GIA, 30% and 25% belong to GHIE and GHIS respectively (Table 4.1). The diverse professional background is a positive for Ghanaian building construction industry and for this study.

Table 4.1 Profile of the Respondents

Respondents Attributes	MMDAEs		CFs		PMs		SSBCs	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Educational Level								
Basic	-	-	-	-	-	-	36	27.2
Secondary	-	-	-	-	-	-	91	69.0
HND	9	6.8	-	-	-	-	5	3.8
Bachelors	111	84.0	72	54.5	10	50.0	-	-
Post-Graduate Diploma	-	-	38	28.8	6	30.0	-	-
Masters	12	9.2	22	16.7	4	20.0	-	-
PhD	-	-	-	-	-	-	-	-
Total	**132**	**100**	**132**	**100**	**20**	**100**	**132**	**100**
Professional Association								
GIA	-	-	36	27.3	9	45.0	-	-
GHIE	4	3.0	25	18.9	6	30.0	-	-
GHIS	6	4.7	41	31.0	5	25.0	-	-
GIOC	22	16.7	30	22.8	-	-	-	-
IET	100	75.6	-	-	-	-	-	-
Others								
Total	**132**	**100**	**132**	**100**	**20**	**100.0**	-	-
Years of working experience								
1-5	7	5.3	-	-	-	-	99	75
6-10	12	9.0	33	25.0	9	35.0	24	18.2
11-15	94	71.2	85	64.4	7	30.0	6	4.5
>16	19	14.5	14	10.6	4	20.0	3	2.3
Total	**132**	**100**	**132**	**100**	**20**	**100**	**132**	**100**

Source: Author's Field Data 2015

NOTE: MMDAs Engineers (MMDAEs); Consultancy Firms (CFs.); Project Officers of Foreign Contractors (PMs); Small-Scale Building Contractors (SSBCs)

4.2.3 Working Experience of the Respondents

On the working experience of the MMDAEs, 5.3% have worked for less than six years and 94.7% of the have worked over six years, but all the consultants and PMs surveyed have over five years working experience. On the other hand only 25% of the SSBCs surveyed have six years or more working experience in the industry (table 4.1). Thus buttressing the point made by Ladzani and Van Vuuren (2002) that about two thirds of all SMEs start-ups fail within the first five years

4.3 CAPACITY-BUILDING NEEDS

Table 4.2 shows the ranking of 19 capacity-needs of SSBCs evaluated and all the measures were above neutral value of 3 except 'reducing taxes' that has mean score of 2.723. The result shows that 'developing managerial skills, 'encouraging prompt payment', 'discouraging political interference in awarding contract','reviewing collateral requirement by the banks' and 'eradicating bribery and corruption' were the five most important measures required to develop the capacities of SSBCs in Ghanaian construction industry. Notably the first three measures recorded very significant mean scores (>4.0). Ranking the 'promoting managerial skills' number one is in line with the proposition put forward by Dlungwana and Rwelamila (2004) for specific programmes that entails the provision of support to small-scale contractors to develop their skills, knowledge and competencies.According to ILO (1987) managerial skills is a major developmental hindrance to small-scale contractors. The need for managerial skills for micro and small business has also been reported (Rogerson, 2008). Managerial skills are very essential to the survival of every business, as deficiency of it means that SSBCs

cannot run their business effectively. That is, if even all other resources are made readily available to them all those resources would be wasted.

Table 4.2 Mean Score Ranking of Capacity-Needs of SSBCs

No	Capacity-Building Needs	Mean Score	Std. Deviation	Mean Ranking
1	Improving management skills	4.1731	0.83238	1
2	Encouraging prompt payment system	4.0938	1.05664	2
3	Eradicating political interference in awarding public contract	4.0144	.84442	3
4	Reviewing collateral requirements	3.8942	1.15680	4
5	Promoting better transparency in the tendering processes	3.8822	.97342	5
6	Eradicating bribery and corruption	3.8486	.87737	6
7	Establishing small-contractors development policies	3.8293	.85993	7
8	Providing business advisory services	3.7812	.92240	8
9	Facilitating financial supports	3.7043	1.00915	9
10	Encouraging long term loans	3.6947	1.01818	10
11	Promoting of sub-contracting	3.6178	.93940	11
12	Reserving a proportion of government contracts	3.6130	1.08293	12
13	Providing continuous training	3.6082	.87141	13
14	Simplifying tendering processes	3.6082	.89056	14
15	Developing technical/professional skills	3.6034	1.12105	15
16	Facilitating accessibility to plant and equipment	3.5264	.85828	16
17	Facilitating technological upgrading	3.4784	1.12132	17
18	Relaxing bonding requirement	3.3774	.95406	18
19	Reducing taxes	2.7236	1.02170	19

The accessibility and availability of finance is very crucial to construction firms most especially the small-scale businesses, because it affect the operations directly. The issue of ‘delayed payment’ is not new in the construction industry (Wilson et al, 1996). According to Bolton Committee (1971) government agencies are also culprit of this

practice; and even use their greater power to perpetuate late-payment to small businesses, the situation in Ghana is not different (Ofori-Kuragu, 2013; Amoah et al 2011). Even it may be worse as in most situations the contractors associations come on public to express their frustration on the late-payment by the government. Nevertheless its impact on the SSBCs is severe; because of they are not able to borrow from financial institutions due to the inability to fulfill collateral demands by the institutions. Even where they are able to borrow very high interest rate is paid to the detriment of the SSBCs. Therefore encouraging prompt payment will go a long way to help the SSBCs to develop their capabilities in an industry which money is described as the lifeblood.

Public Procurement is a major policy tool that can be used to enhance capacities of the SMEs, however, the transparency and fairness with which contracts are awarded is the important towards the attainment of this objective. Political party affiliation is a major influential factor to get public contracts in Ghana (Ofori-Kuragu, 2013). Therefore, the respondents ranking of 'eradicating political interference in awarding contract' as the third most important needs of the SSBCs is the affirmation of that perception or reality. The political interference in awarding public contract is inimical to the development of entrepreneurship as it can deprive the capable SSBCs opportunity to have fair access to public contract which is critical to the survival of most small-businesses like SSBCs.

Ranking 'reviewing collateral requirements' among the top five most important needs brings to light again the challenges SSBCs in accessing financial support from banks. Also 'promoting better transparency in the tendering processes' being ranked among the top five is an indication that unorthodox means are being used to deprive the capable SSBCs chances to have fair access to public contracts.

4.3.1 Factor Analysis of Capacity-Need of SSBCs

In attempt to reduce these factors to a much smaller size and also to determine the degree of association of variable with the component, a factor analysis was performed on the eighteen (18) variables to determine the number of factors shared in common. The variable ‘reducing taxes’ was excluded as the mean score for that variable was below 3.0. The Kaiser-Meyer-Olkin (KMO) sampling adequacy value of 0.647wasabove the minimum requirement of 0.5.Also the Bartlett's Test of Sphericity with a Chi-Square was 2615.527 with a significant value of 0.000 means that the null hypothesis of the correlation matrix being identical is rejected hence; there exist significant correlations in the data set that is appropriate for factor analysis.Table 4.2.2 shows the factor loadings, which signify the association between the variables and how the variables are weighted for each factor. For this study factor loadings greater than 0.5 were only considered, however, the variable ‘establishing small-contractors development policies’ was retained because its loading is close to the 5.0 retention criteria. (0.498). Six components came out from the analysis on the basis of the eigenvalues ≥1.0 rule (Table 4.3).

Table 4.3 Rotated Component Matrixof Capacity-needs of SSBCs

		Component					
No	**Capacity-needs of SSBCs**	**1**	**2**	**3**	**4**	**5**	**6**
1	Discouraging political interference in awarding public contract	.903					
2	Promoting better transparency in the tendering processes	.853					
3	Eradicating bribery/corruption	.590					
4	Promoting of sub-contracting		.743				
5	Reserving a percentage of government contracts		.648				
6	Relaxing bonding requirement		.643				
7	Simplifying tendering processes		.587				
8	Establishing small-contractors development policies		.498		.		
9	Facilitating financial supports			.702			
10	Developing technical/professional skills			.695			
11	Facilitating technological upgrading			.658			
12	Facilitating accessibility to plant and equipment			.517			
13	Encouraging long term loans				.810		
14	Providing continuous training					.852	
15	Providing business advisory services					.797	
16	Improving management skills						.763
17	Reviewing collateral requirements						.717
18	Encouraging prompt payment system						.549

Note: N= 416, Bartlett's Test of Sphericity Significance level= 0.000, Insignificant factor loadings,KMO value= 0.647

Table 4.4 Total Variance of Capacity-needs Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**	**Total**	**% of Variance**	**Cumulative %**
1	3.534	18.598	18.598	3.534	18.598	18.598	2.514	13.232	13.232
2	2.347	12.351	30.948	2.347	12.351	30.948	2.511	13.214	26.445
3	2.068	10.885	41.833	2.068	10.885	41.833	2.046	10.766	37.212
4	1.901	10.007	51.839	1.901	10.007	51.839	1.823	9.593	46.805
5	1.550	8.157	59.997	1.550	8.157	59.997	1.805	9.498	56.303
6	1.092	5.745	65.742	1.092	5.745	65.742	1.793	9.439	65.742
7	.938	4.936	70.679						
8	.905	4.764	75.442						
9	.672	3.537	78.979						
10	.600	3.160	82.139						
11	.560	2.950	85.088						
12	.494	2.598	87.686						
13	.468	2.461	90.148						
14	.445	2.343	92.491						
15	.378	1.991	94.482						
16	.341	1.797	96.279						
17	.303	1.593	97.872						
18	.250	1.318	99.190						
19	.154	.810	100.00						

According Agyekum (2012) the first major component in factor analysis is the combination that accounts for the largest amount of variance. From Table 4.4, component 1 has total variance of3.534, which accounts for 18.598% of the total

variance of the 19 factors. Component 2 has total variance of 2.347 accounting for 12.351% of the total variance of the 19 factors, component 3 has a total variance of 2.068 accounting for 10.885% of the total variance of the 19 factors, component 4 has a total variance of 1.901 accounting for 10.007 % of the total variance of 19 factors, component 5 has a total variance of 1.550 accounting for 8.157 % of the total variance of 19 factors and component 6 has a total variance of 1.092 accounting for 5.745% of the total variance of 19 factors.

Component 1 (Enabling Business Environment) explains the variables eradicating political interference in awarding public contract, eradicating bribery/corruption and promoting better transparency in the tendering processes. Creating conducive or friendly environment helps to develop small businesses and an important provision for capacity building. OECD (2006) has argued that creating conducive business environment ensuresgood governance and absence of corruption. It is important therefore for the government put in place policies that check that deny the small-scale contractors job and financial opportunities.

Component 2 (Job opportunities) explains variables promoting of sub-contracting, reserving a percentage of government contracts, relaxing bonding requirement, simplifying tendering processes and establishing small-contractors development policies. Creating job opportunities for small-small contractors through linkages with the large-scale contractors improve their capabilities and track record as failure of small business has also been attributed to lack of experience. The small-scale contractors would find it extremely difficult to compete with the large scale contractors if they are competing for job opportunities. The number of jobs done also impact on their job track

record which is also is important in the construction industry. Against this background that Wattanapruttipaisan (2002) offers that sub-contracting between the large enterprise and SMEs remove capital and sustained jobs constraints of SMEs.

Component 3 (Technical support) explains variables developing technical skills, financial supports, facilitating technological upgrading and facilitating accessibility to plant and equipment. In every business environment there are certain skills required that by the entrepreneurs to be able to manage the business. Building construction works are usually procured with tender document that small scale contractors may not have the capacity to understand the technical terms therein. They also need knowledge on the modern technology and equipment to be able to effective and efficient, thus supporting the argument advanced by Hussain (2000) that the SMEs in addition to financial assistance in the areas such as contract services and professional training for their development.

Component 4 (Financial support) explains variables encouraging long term loans. Finance has been a major constraint to the development of small businesses. They are not able to compete with the large firms for loans as they are considered too risky to be given loans. Moreover, the small businesses are not able to meet the collateral requirements by the financial institutions hence require financial support. Bouri et al (2011) have stressed that SMEs are constrained in accessing the capital which they need to grow and expand that makes it more imperative to lend them financial support.

Component 5 (Business Development Services) explains variables providing continuous training and providing business advisory services. Business Development

Services has become most important intervention in developing the capacities of small and medium enterprises. Through business advisory services the small businesses are able to overcome challenges such as legal and regulatory constraints, access to financial services and marketing constraints. Moreover through business development services small businesses can address their challenges in financial management; cash flow management and marketing. As stated by Ellahi et al (2010) business development services provides wide range of services that enhance the performance of SMEs.

Component 6 (Entrepreneurship support) explains improving management skills, reviewing collateral requirements and encouraging prompt payment system. Entrepreneurship support is very critical for small business survival and development because if all the business development services are provided and the environment still works against the entrepreneurs. Entrepreneurs or small-scale contractors need certain amount of assistants to protect their investments. Also they need business environment where they could access loans without rigid requirements and high interest rate. Additionally, delays on the payment of small scale contractors create cash flow problem which for more is the sources for more than 50% of small businesses failure (CROWN, 2007)

4.4 BENEFITS OF SUB-CONTRACTING RELATIONSHIP

The respondents were asked to express their views on the benefits of sub-contracting relationship arrangement management contractor and small-scale contractors, that is, if sub-contracting relationship between a management contractor and SSBCs could contribute to the improvement of the capacities of SSBCs.

The table 4.5 shows the mean score ranking by all the respondents. The mean score for each of the factors were greater than the neutral value of 3.0. In the opinion of the respondents the five major direct benefits to be gained from the sub-contracting relationship by the SSBCs are 'raising credit-worthiness', 'creating job opportunities', 'facilitating technology transfer', 'providing financial support' and 'mentoring'. 'facilitating technology transfer', 'job opportunities', 'raising credit-worthiness', 'acquisition of managerial skills' and 'lending of equipment'.

Ranking of technology transfer as the first benefits is significant, thus buttressing the point made by Yong (2011) that the SMEs do not have enough resources to undertake research and development by themselves, thus accessing technologies from external source is a surest and cheapest means to enhance their technological capacities of SMEs. It also supports the argument that subcontracting relationship promotes effective channel for technological improvement to small and mediumenterprises (Morcos, 2003). The result further reveals the job opportunities as the second important benefit of sub-contracting.

In the construction industry working experience and track records is very important and it could be a major hindrance to small-scale contractors' effort to secure job from clients, therefore, the job opportunities created by sub-contracting arrangement goes a long way to enrich the track record of the small-scale contractors; as it creates the necessary resource backing to small businesses (Hayashi, 2002). The benefits of credit-worthiness that can be obtained from sub-contracting arrangement have been reported by Hayashi (2002), thus the job secure from the sub-contracting for example can serve as collateral for loans (Morcos, 2003); a financial constraints experiences by the small-

business have been reported severally (Mensah, 2004;Nissanke, 2001). The results further confirm the evidences on the role of sub-contracting towards the development of SMEs (Yong, 2011; Kumar and Subrahmanya, 2007; Ruffing, 2007; Taymaz, 2004; Berry et al, 2002; Hayashi, 2002; Deardorff and Djankov, 2000

Table 4.5 Mean score of the benefits of sub-contracting relationship by all the groups

No	Benefits of sub-contracting to SSBCs	Mean	Std. Dev.	Rankings
1	Facilitating technology transfer (Input)	3.9231	1.19634	1
2	Creating job opportunities (Input)	3.7580	.93133	2
3	Raising credit-worthiness/rating (Output)	3.7180	1.06944	3
4	Providing financial support (Input)	3.6793	1.40321	4
5	Mentoring (input)	3.6042	1.03668	5
6	Acquisition of managerial skills (Output)	3.5587	1.02264	6
7	Improved technical capabilities(Output)	3.5448	.97160	7
8	Lending of equipment (Input)	3.5427	1.25337	8
9	Better supervision (Input)	3.5246	1.31455	9

Table 4.6 Mean score ranking of the benefits of sub-contracting relationship by each group

No	Benefits of sub-contracting to SSBCs	MMDAEs		CFs		PMs		SSBCs	
		Mean	**Ranking**	**Mean**	**Ranking**	**Mean**	**Ranking**	**Mean**	**Ranking**
1	Lending of equipment (Input)	3.6515	5	3.0009	9	3.2000	8	4.3182	7
2	Mentoring (Input)	3.6742	4	3.9015	1	3.8000	1	4.2803	8
3	Acquisition of managerial skills (Output)	3.5833	6	3.1894	5	3.5000	6	3.9621	9
4	Providing financial support (Input)	3.4697	8	3.0682	6	3.5021	5	4.3788	5
5	Raising credit-worthiness/rating (Output)	3.7424	3	3.0097	8	3.4500	7	4.5152	2
6	Creating job opportunities (Input)	3.5379	7	3.4848	3	3.6000	4	4.4091	4
7	Facilitating technology transfer (Input)	3.8106	1	3.7348	2	3.7000	3	4.4470	3
8	Better supervision (Input)	3.0333	9	3.2727	4	3.0500	9	4.7424	1
9	Improved technical capabilities (Output)	3.7426	2	3.0379	7	3.7500	2	4.3409	6

Table 4.6above also shows the ranking by each group. The results show varied opinions by the respondents. The consultants and the project officers ranked ‘facilitating technology transfer’ as the first benefit to be obtained from the sub-contracting. The MMDAEs chose ‘facilitating technology transfer’ whiles small-scale contractors considered ‘better supervision’. The consultants further perceive the least benefit to be obtained from sub-contracting arrangement as ‘mentoring’ whiles the project officers consider ‘better supervision’. The MMDAEs and small-scale contractors perceive ‘Better supervision’ and ‘Acquisition of managerial skills’ as the least benefits of sub-contracting respectively. Notably the SSBCs ranked all the factors significantly high

above ‘4’, except ‘acquisition of managerial skills’ with a mean score of 3.9621 suggesting that sub-contracting relationship is important to their development (Table 4.6).

4.4 OBSTACLES TO MANAGEMENT CONTRACTING PROCUREMENT SYSTEM

The table 4.7presents the ranking of the obstacles to the implementation of management contracting procurement system.

Table 4.7 Mean score ranking of obstacles to the implementation of MCPS

Obstacles	Mean	Std. Deviation	Rankings
Personal understanding of MCPS	3.7218	1.05506	1
Absence of enabling law	3.6972	1.11836	2
Absence of standard contract condition	3.6513	1.06888	3
Ability of Management Contractor to satisfy the client interest	3.6021	1.01584	4
Fear of more contractual dispute	3.5880	1.20482	5
Absence of suitable project to implement Management Contracting	3.5423	1.06086	6
Relative cost of management contracting	3.4824	.97841	7
Lack of confidence in management contracting arrangement	3.4683	1.14144	8
Others practitioners understanding	3.1268	.99723	9
Scarcity of qualified personnel (consultants & contractors)	3.0563	.93819	10

The top three rankings from the table 4.7 are ‘personal understanding of MCPS’ ‘absence of enabling law’ and ‘absence of standard contract condition’.The choice of ‘personal understanding of MCPS’as the first choice differs significantly from Teo and Ofori (1999) which the respondents ranked ‘others practitioners understanding’ as the first obstacle. However the choice of ‘absence of enabling law’ confirms the study by Komu et al (2012) which identified absence of regulatory frame as the major hindrance to the promotion of MCPS in Tanzania. Ghana being a developing country just as Tanzania where government is the major client in the construction industry its policies has a major effect on the industry therefore selection of ‘absence of enabling law’ is the reflection that public procurement law does not promote other non-traditional procurement like MCPS.

Teo and Ofori (1999) considered the ‘absence of standard contract condition form’ as the major impediment to MCPS as it was ranked by the respondents as the third obstacle. Similarly Komu et al (2012) mentioned it as one the three challenges to MCPS. In the opinion of the respondents ‘scarcity of qualified personnel’ is the least obstacle to MCPS. But Teo and Ofori (2012) identified shortage of managerial personnel as the fourth obstacles.

4.4.1 Factor analysis of the obstacles to Management Contracting Procurement

The tables 4.8 and table 4.9 present the results of the factor analysis performed on the potential obstacles to implementation of MCPS.

Table 4.8 Rotated Component Matrix of obstacles to the implementation of MCPS

Component					
No	**Obstacles**	**1**	**2**	**3**	**4**
1	Personal familiarity of MCPS	.772			
2	Absence of suitable project to implement Management Contracting	.719			
3	Others practitioners understanding	.510			
4	Scarcity of qualified personnel (consultants & contractors)		.757		
5	Relative cost of management contracting		.720		
6	Lack of confidence in management contracting arrangement			.792	
7	Fear of more contractual dispute			.722	
8	Ability of Management Contractor to satisfy the client interest			.504	
9	Absence of standard contract condition				.807
10	Absence of enabling law				.549

Note: N= 284, Bartlett's Test of Sphericity Significance level= 0.000, Insignificant factor loadings, KMO value=0.503

Table 4.9 Total Variance of Obstacles to the Implementation of MCPS Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.019	20.186	20.186	2.019	20.186	20.186	1.679	16.789	16.789
2	1.631	16.311	36.496	1.631	16.311	36.496	1.630	16.297	33.086
3	1.348	13.476	49.973	1.348	13.476	49.973	1.576	15.765	48.851
4	1.127	11.272	61.245	1.127	11.272	61.245	1.239	12.394	61.245
5	.993	9.927	71.172						
6	.817	8.174	79.346						
7	.727	7.266	86.613						
8	.548	5.478	92.091						
9	.411	4.113	96.204						
10	.380	3.796	100.000						

Extraction Method: Principal Component Analysis

A factor is considered to be significant to the study if it has a mean value of ≥3.0.All the factors identified from the literature as obstacles to management contracting procurement method practice (Komu et al, 2012; Teo and Ofori, 1999) were all included in the factor analysis as each of them had communalities of 1.0 indicating their suitability for the factor analysis. To able to identify the major obstacles to the implementation of MCPS the ten factors were reduced with the help of factor analysis to four. In doing this, principal component analysis with Varimax rotation and Kaizer

Normalization was used to determine which factors have empirical significance. Factor retention was by the eigenvalue 1.0 criterion, suggesting that only factors that account for variances greater than one should be included in the factor extraction (Table 4.9).

The Kaiser-Meyer-Olkin (KMO) sampling adequacy value of 0.503 was above the minimum requirement of 0.5. Also the Bartlett's Test of Sphericity with a Chi-Square was 384.052 with a significant value of 0.000 means that the null hypothesis of the correlation matrix being identical is rejected hence; there exist significant correlations in the data set that is appropriate for factor analysis. Table 4.8 shows the factor loadings, which signify the association between the variables and how the variables are weighted for each factor.

Component 1 (Limited knowledge on MCPS)explains the variables 'personal understanding', 'absence of suitable project to implement management contracting' and 'others practitioners understanding. This component accounts account for 20.186% of the total variances. The limited knowledge on the part of other practitioners and lack of personal understanding of management contracting is major impediment to the implementation of management contracting procurement (Teo and Ofori, 1999). Poor understanding of the procurement method could lead to bad procurement solutions (Miller et al, 2009), as a result of insufficient more clients will reject management contract.

Component 2 (Absence of qualified personnel) explains 'scarcity of qualified personnel' and 'relative cost of management contracting. The component 2 also account for 16.311% of the total variances. Every innovation comes along with required skills,

and as long as there is a shortage of that required skills it would impede the innovation process. Komu et al (2012) point that qualified management contractor creates barrier for management contracting practice. Teo and Ofori (1999) add that shortage of managerial personnel poses challenges to implementation of the management contracting procurement.

Component 3 (Lack of confidence in Management Contracting) explains the factors 'lack of confidence in management contracting arrangement', 'fear of more contractual dispute contracting arrangement' and 'ability of management contractor to satisfy the client interest' and also account for 13.476% of the total variance. The lack confidence in management contracting has been indicated by Teo and Ofori (1999).

Component 4 (Absence of enabling law)explains the factors 'absence of standard contract condition' and 'absence of enabling law'. Komu et al (2012) find the absence of regulatory framework as one of the major obstacles to the implementation of management contracting procurement. Similarly in Ghana public procurement law in its current form can also pose a challenge to management contracting procurement

4.5 MEASURES TO PROMOTE MANAGEMENT CONTRACTING PROCUREMENT SYSTEM

The respondents were asked to appraise the possible measures to promote the implementation of MCPS in Ghanaian Building Construction Industry and table 4.5.1 shows the mean scores, standard deviations and rankings the proposedmeasures. All the six possible measures were ranked above a neutral score of 3.0 indicating that all the

factors are significant thus affirms the recommendations made by Komu et al (2012) and Teo and Ofori (1999).

Table 4.10 Mean Ranking of Measures to Promote MCPS

Potential Measures	Mean Score	Std. Deviation	Ranking
Developing a regulatory framework for management contracting practice	4.1761	.77778	1
Organising seminars on management contracting for stakeholders in the building construction industry	4.1408	.77589	2
Revising existing rule and documents to recognise other non-traditional procurement methods	3.8712	.63493	3
Educating the professionals on management contracting method	3.8415	.86525	4
Publicising major projects executed successfully with management contracting arrangement.	3.7958	.90572	4
Publication of qualified management contractors in professional journals	3.7113	1.13462	6

4.5.1 Analysis of Variance of Measures to promote Management Contracting Procurement System

From table 4.10 all the measures evaluated have their mean score ranking greater than the neutral score of 3.0, indicating that all of the six measures are significant, however when the responses were further evaluated with Analysis of Variance (ANOVA) to ascertain whether all the three groups agree the result show significance differences between the groups (table 4.11).

The results from the table 4.11 below shows that, on the measures of'revising policies to recognise other non-traditional procurement methods', 'developing a framework for management contracting practice' and others there was a significant difference among

the groups as the significant levels are less than 0.05. However, the measures such as 'educating the professionals on management contracting method' did not record significantly different scores among the three groups.

Table 4.11ANOVATest of Mean Scores of Measures to Promote MCPS

Measures to promote MCPS		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Revising existing rule and documents to recognise other non-traditional procurement methods	Between Groups	21.640	2	10.820	14.443	.000
	Within Groups	210.515	282	.749		
	Total	232.155	284			
Educating the professionals on management contracting method	Between Groups	2.014	2	1.007	1.348	.261
	Within Groups	209.856	282	.747		
	Total	211.870	284			
Developing a framework for management contracting practice	Between Groups	22.473	2	11.236	21.230	.000
	Within Groups	148.724	282	.529		
	Total	171.197	284			
Publicising qualified management contractors in professional journals	Between Groups	76.412	2	38.206	37.289	.000
	Within Groups	287.912	282	1.025		
	Total	364.324	284			
Organising seminars on management contracting for stakeholders in the building construction industry	Between Groups	6.278	2	3.139	5.376	.005
	Within Groups	164.088	282	.584		
	Total	170.366	284			
Publicising major projects executed successfully with management contracting arrangement.	Between Groups	5.124	2	2.562	5.956	.003
	Within Groups	120.876	282	.430		
	Total	126.000	284			

Table 4.12 Least Significant Difference (LSD) of Measures to Promote MCPS

Multiple Comparisons							
Dependent Variable DV	**(I)**	**(J)**	**Mean Difference (I-J)**	**Std. Error**	**Sig.**	**95% Confidence Interval**	
						Lower Bound	**Upper Bound**
Revising existing rule and documents to recognise other non-traditional procurement methods	CFs	PMs	-.50000	.20769	.017	-.9088	-.0912
		MMDAEs	-.56061	.10654	.000	-.7703	-.3509
	PMs	CFs	.50000	.20769	.017	.0912	.9088
		MMDAEs	-.06061	.20769	.771	-.4694	.3482
	MMDAEs	CFs	.56061	.10654	.000	.3509	.7703
		PMs	.06061	.20769	.771	-.3482	.4694
Educating the professionals on management contracting method	CFs	PMs	.18182	.20736	.381	-.2264	.5900
		MMDAEs	.16667	.10637	.118	-.0427	.3761
	PMs	CFs	-.18182	.20736	.381	-.5900	.2264
		MMDAEs	-.01515	.20736	.942	-.4233	.3930
	MMDAEs	CFs	-.16667	.10637	.118	-.3761	.0427
		PMs	.01515	.20736	.942	-.3930	.4233
Developing a framework for management contracting practice	CFs	PMs	.31970	.17457	.068	-.0239	.6633
		MMDAEs	.58333	.08955	.000	.4071	.7596
	PMs	CFs	-.31970	.17457	.068	-.6633	.0239
		MMDAEs	.26364	.17457	.132	-.0800	.6073
	MMDAEs	CFs	-.58333	.08955	.000	-.7596	-.4071
		PMs	-.26364	.17457	.132	-.6073	.0800
Publicising of qualified management contractors in professional journals	CFs	PMs	.20758	.24288	.393	-.2705	.6857
		MMDAEs	-1.00758	.12460	.000	-1.2528	-.7623
	PMs	CFs	-.20758	.24288	.393	-.6857	.2705
		MMDAEs	-1.21515	.24288	.000	-1.6933	-.7371
	MMDAEs	CFs	1.00758	.12460	.000	.7623	1.2528
		PMs	1.21515	.24288	.000	.7371	1.6933
Organising seminars on management contracting for professional	CFs	PMs	.46364	.18336	.012	.1027	.8246
		MMDAEs	-.12879	.09406	.172	-.3139	.0564
	PMs	CFs	-.46364	.18336	.012	-.8246	-.1027
		MMDAEs	-.59242	.18336	.001	-.9534	-.2315
	MMDAEs	CFs	.12879	.09406	.172	-.0564	.3139
		PMs	.59242	.18336	.001	.2315	.9534
Publicising major projects executed successfully with management contracting arrangement.	CFs	PMs	.24394	.15738	.122	-.0658	.5537
		MMDAEs	.27273	.08073	.001	.1138	.4316
	PMs	CFs	-.24394	.15738	.122	-.5537	.0658
		MMDAEs	.02879	.15738	.855	-.2810	.3386
	MMDAEs	CFs	-.27273	.08073	.001	-.4316	-.1138
		PMs	-.02879	.15738	.855	-.3386	.2810

NOTE: The mean difference is significant at the 0.05 level. MMDAs Engineers (MMDAEs); Consultancy Firms (CFs.); Project Officers of Foreign Contractors (PMs); Small-Scale Building Contractors (SSBCs)

4.5.2 Least Significant Difference

From the 4.11 it shows that there are some factors that were scored differently by the three respondent groups in the study. In order to ascertain where the differences are coming from as identified, a Least Significant Difference (LSD) was used to enable the source of the difference to be identified. The table 4.12 below shows the test results for the pairwise comparisons of the measures that were evaluated.

On the revision of existing rules and documents to recognise other non-traditional procurement methods, there was significant difference between the consultants and the MMDAEs whiles there was no significant difference between the project managers and MMDAEs. However, all of the respondents groups agreed that education of the professionals on management contracting method would promote the implementation of MCPS; as professionals are in most situations reluctant to try other forms of procurement (Shields, 2005).Also from the result of the table 4.5.3 there was agreement between the consultants and the project managers' and also between the MMDAEs and the project managers on the development of a framework for to promote the implementation of MCPS. Komu et al (2012) identify absence of regulatory frame work as one major barrier, but there was disagreement between the MMDAEs and the consultants on that measure.

On the measure to publicise qualified management contractors in professional journals to promote management contracting there was agreement between consultants and project managers, but there were disagreement between the consultants and the MMDAEs, and between the project managers and MMDAEs.Also the issue of

organisation of seminars on management contracting for professional to promote MCPS consultants agreed with the project managers and also agreed with the MMDAEs but there was disagreement between project managers and MMDAEs.

However, there was strong agreement between project managers and MMDAEs, and project managers consultants that publicising or showcasing major projects executed successfully with management contracting arrangement would promote MCPS implementation, but there was disagreement between MMDAEs and consultants.

4.6 TOWARDS THE DEVELOPMENT OF THE CAPACITY-BUILDING FRAMEWORK

The design of the framework is primarily based on the first four objectives of the study. From the result of the factor analysis on the obstacles to the MCPS, four components were emergedand these were used as the obstacles in designing the framework. Moreover, the result of the benefits of sub-contracting relationship also showed that all the benefits were significant and these benefits were separated into ‘sub-contract inputs and sub-contract output’ in designing the framework. The ‘input’ or ‘sub-contracted inputs’is referred to as the resources offering by the management contractor (sub-contract offering firms), and the ‘output’ or ‘sub-contracted output’ is referred to as the resourcesreceiving by the small-scale building contractors(sub-contract receiving firms). Similarly it was found that all the measures evaluated were significant and they were used as the measures to overcome the obstacles in designing the framework.

4.6.1 The objective of the framework

The basic objective of the framework is to seek for the upgrading on the low financial capabilities, low technological capabilities and low level of managerial capabilities of small-scale building contractors in order for them to improve their performance. As a result of that this framework try to address theneeds of small-scale contractors due to insufficient modern equipment; lack of credit-worthiness; low working capital; absence of job-opportunities; low technical skills, little management skills and lack of track-record/experience.

4.6.2 Phases of the capacity-building framework

There are four main pillars on which the management contracting procurement capacity-building strategy is being supported. These are obstacles to the strategy, measures to overcome the obstacles; benefits of the sub-contract input and benefits of sub-contract output. But there are eight-phases to the implementation of this capacity-building framework. These are: needs-assessment; obstacles, measures; sub-contracted input; sub-contract output; capacity sustenance, desirable outcome and evaluation phases.

1) Needs-assessment: The phase at which the small-scale building contractors would be assessed to determine who should be selected and assisted or/and what kind of assistance would be needed.

2) Obstacles to the Strategy: The stage which the obstacles likely to pose challenges to the strategy is identified. The obstacles are the factors that might considerably impede the chances of implementing the strategy in the first place.

3) Measures to overcome the obstacles: This phase is about implementing strategies to overcome the challenges that could pose threat to the capacity-building strategy. The measures refer to the necessary steps take to contain the obstacles, in order to improve the chances of implementing the strategy.

4) Capacity-Inputs: The stage of capacity-building process where the interventions require for developing the capacities of the SSBCs is introduced in the process. Theyare the sub-contracted inputs or resources that are brought into the process by the management contractor to assist the development of the small-scale building contractors.

5)Capacity-Outputs: The out-put is refers to as the benefits gained as a result of the input. The phase where the small-scale contractors would gain the improvement requires or the capacity is built as a result of the sub-contracted inputs by the management contractors. At this stage if the expected output is not attained an evaluation of the input can be undertaken.

6) Capacity Sustenance: The stage where the enabling business environment is createdfor the small-scale contractors in order to sustain their capacitiesthat have been built. This phase is important and effective way for the small-scale building contractors those have gone through the strategy to stay in the construction business and to demonstrate the capacities acquired.

7) Desirable Capacity-outcome: The phase where the resources or the improvement gained is applied, that is, the small-scale contractors put into practice the capacities gained from the strategy. If the performance indicators are attained the process ends, but

if the performance indicators are not attained the process continue by evaluating the inputs.

8) Evaluation-phase: The stage where the impact of strategy is evaluated by assessing the result of outcome. At this stage the inputsor the method of instruction is reviewed and the lessons learnt are integrated into the process to continue as indicated in figure

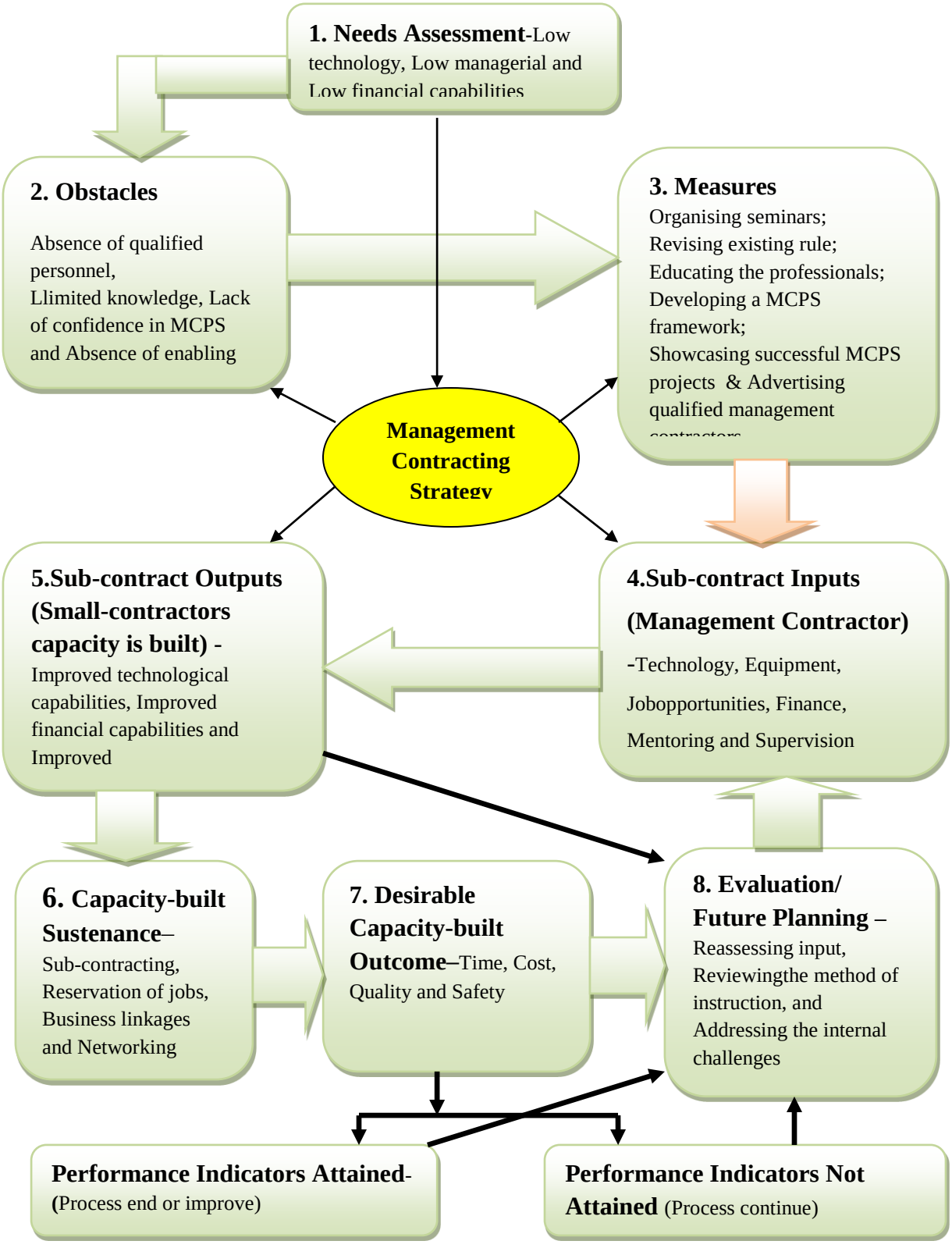

Fig. 4.2 A capacity-building framework through the implementation of management contracting procurement system concept

SUMMARY

This chapter presented results from the analysis of critical capacity-building needs of small-scale building contractors; the benefits of sub-contracting relationship towards the capacity building of small-scale building contractors; the potential obstacles to the implementation of management contracting procurement; and the possible measures to promote management contracting procurement. In the end a capacity-building framework that has a potential to transform capabilities (financial, technical and managerial) of small-scale building contractors using the concept of management contracting procurement has been proposed.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5 INTRODUCTION

This chapter presents conclusions drawn from the findings and gives some recommendations based on the results of the study as well as the future study. The recommendations are intended to help stakeholders in the building construction industry particularly the policy makers to adopt a policy that will help to develop the building construction industry through the promotion of small-scale building contractors in Ghana.

The aim of the study was to explore the application of management contracting procurement system concept as a capacity-building strategy to develop SSBCs. The specific objectives of the study include: to identify the critical capacity-needs of SSBCs; to identify the benefits of sub-contracting relationship towards the capacity building of small-scale building contractors; to identify the potential obstacles to implementation ofmanagement contracting procurement system; to identify the possible measures to promote the implementation ofmanagement contracting procurement system; and to propose a capacity-building framework using the concept of management contracting procurement system.

5.1 CONCLUSIONS

A summary of the findings obtained from the analysis of the data have been related to the objectives of the study in this section.

5.1.1 Capacity-needs

From the study, the five major needs of small-scale contractors that were identified include;‘managerial skills development’, ‘promoting prompt payment system’, ‘lessening political interference in awarding public contract’, ‘reviewing collateral requirements’ and ‘promoting better transparency in the tendering processes’. Further examination with factor analysis enabled the eighteen capacity-needs to be grouped into six include: ‘enabling business environment’, ‘job opportunities’, ‘technical support’,‘financial support’, ‘business development support’ and ‘entrepreneurship support’.

5.1.2 Benefits of sub-contracting

Out of the nine potential benefits of sub-contracting relationshipsevaluated by the respondents‘technology transfer’, ‘creation of job opportunities’and ‘improvedcredit-worthiness’ were ranked as the three most important benefits to the development of small-scale building contractors.

5.1.3 Obstacles to the implementation of MCPS

The ten obstacles that were evaluated as the potential obstacles to the implementation of management contracting procurement system the top three potential were‘personal understanding of management contracting procurement system’ ‘absence of enabling law and ‘absence of standard contract condition’. But factor analysis helped to group

the ten factors into four components: ‘inadequate knowledge’,‘absence of qualified personnel’, ‘lack of confidence in management contracting’ and ‘absence of enabling law’.

5.1.4 Measures to promote the implementation of MCPS

The results further revealed that all the measures were significant to the promotion of management contracting procurement. But the three most important measures to drive the promotion of management contracting procurement in Ghana were ‘developinga regulatory framework for management contracting practice’, ‘organising seminars on management contracting for stakeholders’ and ‘revision of existing rule and documents to recognise other non-traditional procurement methods’. However there were differences among the respondents on the measures except on the ‘educating the professionals on management contracting method’ which all the respondents agreed.

5.2 RECOMMENDATION

As result of the findings and conclusions drawn from the study, the following recommendations are beingmade in order to develop the capacities of small-scale contractors in Ghana.

- To create job opportunities for small-scale contractors the government would need to adopt policies that promote subcontracting.This approach provides considerable prospects for the development of small-scale contractors whiles helping to distribute wealth and income in the country;
- To ensure prompt payment by government/clients, eradicate bribery and corruption; promote transparency; lessening political interferenceand to ensure

fairnessin the award of public construction contracts, Competition and Fair Trading Authority should set-up address the concerns of small-scale contractors;

- To promote business and technical development of small-scale contractorsBusiness Advisory Centres (BACs) of National Board of Small Scale Industries (NBSSI) should extend their services to small-scale contractors; and
- To promote management contracting procurement in Ghana professional bodies and educational institutions should take the lead role in the education in addition to the enactment of appropriate laws by the government.

5.4 LIMITATIONS

As a result of a lack of reliable data on the small-scale building contractors the study was limited to those who have had or have working relationship with the local government authorities. Similarly, the consultants were also limited to those who have had or have working relationship with the local government authorities. On the part of large-scale contractors it was limited to ten foreign firms.

5.5 FURTHER STUDIES

As a result of findings arising from this study further studies could be conducted

- Management Contracting Procurement Practice in Ghanaian Construction industry.
- The effect of political interference on the development of small-scale contractors in Ghana.
- Studies should be carried out to validate the framework by implement it on some selected projects.

5.6 IMPLICATION

The implementation of strategy would help to produce a generation of efficient and innovative crop of small-scale building contractors that would grow to become large national indigenous contractors to drive the excellence in the Ghanaian building construction industry.

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KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

COLLEGE OF ARCHITECTURE AND PLANNING

DEPARTMENT OF BUILDING TECHNOLOGY

MPHIL CONSTRUCTION MANAGEMENT RESEARCH QUESTIONNAIRE

ASANTE JOSEPH (024-4745815/027-2690181)

PREAMBLE

Studies have shown that high proportion of the Small and Medium-sized Contractors business fail within their first 5 yrs. of existence. This unfortunate situation is largely blamed on lack of capacity and the challenges confronting the small and medium-sized contractors'.

It is in view of this concern, that this study is proposing that the small-sized contractors' capacities can be improved by working as sub-contractors under a Management Contractor (competent, experienced and relatively large contractor), and accordingly overcome some of the challenges they face.

TOPIC

Transforming Small-Scale Building Contractors Capabilities through Management Contracting Procurement System

AIM

To explore the application of Management Contracting Procurement System as a capacity-building strategy to promote Small and Medium-sized Contractors (SMCs)

BRIEF EXPLANATION OF MANAGEMENT CONTRACTING CONCEPT

- It is a procurement method by which a Management Contractor (competent, experienced and relatively large contractors) is appointed by the project owner to work together with the other consultants
- Management Contractor does not perform construction works but manage the activities of sub-contractors (small-sized contactors) who carry out the actual construction works.
- Management Contractor supervises and provides management services, and can provide site services; plant and equipment; facilities; hoarding; etc. to support the activities of sub-contractors for fee reimbursed by the client.

APPENDIX I

QUESTIONNAIRE FOR LARGE-SIZED CONTRACTING FIRMS/CONSULTANCY FIRMS AND CLIENTS (MMDAs)

Section 1: Respondents Profile

1) Which of these organisations do you work for?

a) Construction Firm [ ]

b) Consultancy Firm [ ]

c) Metropolitan/Municipal/District Assemblies [ ]

2) Your current job designation

a) CEO of Consultancy Firm [ ] b) Project Officer/Manager [ ]

c) MMDAs Engineer [ ] e) Other .....

3) Your highest level of education

a) HND [ ] b) Bachelors [ ]

c) Post-Graduate Diploma [ ] d) Masters [ ]

e) PhD [ ] f) Other

.....

4) Your professional association.

a) Ghana Institute of Architect (GIA) [ ]

b) Ghana Institute of Engineers (GHIE) [ ]

c) Ghana Institution of Surveyors (GHIS) [ ]

d) Ghana Institution of Construction (GIOC) [ ]

e)Institute of Engineers and Technology (IET) [ ]

f) Others.....

5) Years of working experience in the construction industry

a) 1-5 [ ] b) 6-10 [ ]

c) 11-15 [ ] d) > 16 [ ]

Section 2.0: Capacity-Building Needs of SSBCs.

Contextual definition:*Capacity-needs are the measures required to help the small-sized contractors to build their capacity or overcome the challenges.*

Below are list of possible capacity-needs of the small-sized contractors. Rank these needs on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Highly unimportant	Unimportant	Neutral	Important	Highly important

Capacity-building needs of small-scale building contractors		1	2	3	4	5
1	Promoting of sub-contracting	1	2	3	4	5
2	Reserving a proportion of government contracts	1	2	3	4	5
3	Providing continuous training	1	2	3	4	5
4	Simplifying tendering processes	1	2	3	4	5
5	Developing technical/professional skills	1	2	3	4	5
6	Facilitating accessibility to plant and equipment	1	2	3	4	5
7	Facilitating technological upgrading	1	2	3	4	5
8	Relaxing bonding requirement	1	2	3	4	5
9	Reducing taxes	1	2	3	4	5
10	Improving management skills	1	2	3	4	5
11	Encouraging prompt payment system	1	2	3	4	5
12	Eradicating political interference in awarding public contract	1	2	3	4	5
13	Reviewing collateral requirements	1	2	3	4	5
14	Promoting better transparency in the tendering processes	1	2	3	4	5
15	Eradicating bribery and corruption	1	2	3	4	5
16	Establishing small-contractors development policies	1	2	3	4	5
17	Providing business advisory services	1	2	3	4	5
18	Facilitating financial supports	1	2	3	4	5
19	Encouraging long term loans	1	2	3	4	5

Section 3.0: Capacity-Building Benefits Obtainable from Sub-Contracting Arrangement

Contextual definition: *Benefits are the capacity-building interventions that would help the SSBCs to develop their capacities.*

Below are list of possible benefits which are obtainable from sub-contracting by the small-sized contractors who work as sub-contractors under management contractor (Large-sized contractor). Rank these benefits on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Highly unimportant	Unimportant	Neutral	Important	Highly important

Benefits of sub-contracting relationship		***1***	***2***	***3***	***4***	***5***
1	Mentoring	1	2	3	4	5
2	Acquisition of managerial skills	1	2	3	4	5
3	Improved technical capabilities	1	2	3	4	5
4	Lending of equipment	1	2	3	4	5
5	Better supervision	1	2	3	4	5
6	Facilitating technology transfer	1	2	3	4	5
7	Offering job opportunities	1	2	3	4	5
7	Raising credit-worthiness/rating	1	2	3	4	5
9	Providing financial support	1	2	3	4	5

Section 4.0: Potential implementation challenges of MCPS

Contextual definition:*Implementation challenges refer to the factors that would considerably impede the chances of adopting Management Contacting Procurement System.*

Below are lists of possible factors that can act as obstacles to the adoption of Management Contracting Procurement. Rank them on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Obstacles to MCPS		***1***	***2***	***3***	***4***	***5***
1	Absence of suitable project to implement Management Contracting	1	2	3	4	5
2	Relative cost of management contracting	1	2	3	4	5
3	Lack of confidence in management contracting arrangement	1	2	3	4	5
4	Others practitioners understanding	1	2	3	4	5
5	Scarcity of qualified personnel (consultants & contractors)	1	2	3	4	5
6	Personal understanding of MCPS	1	2	3	4	5
7	Absence of enabling law	1	2	3	4	5
8	Absence of standard contract condition	1	2	3	4	5
9	Ability of Management Contractor to satisfy the client interest	1	2	3	4	5
10	Fear of more contractual dispute	1	2	3	4	5

Section 5.0: Possible measures to promote the implementation of MCPS

Contextual definition: *Measures refers to the factorsthat would considerably promote the chances of adopting Management Contacting Procurement System.*

Below are possible measures to promote the adoption of Management Contracting Procurement. Rank the measures on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Measures to Promote MCPS		***1***	***2***	***3***	***4***	***5***
1	Revision of Procurement Act to recognise other non-conventional procurement methods	1	2	3	4	5
2	Intensification of Management Contracting programmes in Tertiary Institutions	1	2	3	4	5
3	Developing code-of-practice for Management Contracting practice	1	2	3	4	5
4	Supporting capable and willing contractors wish to practice as management contractors	1	2	3	4	5
5	Promotion of management contracting by government on its funded project	1	2	3	4	5
6	Publication of qualified management contractors in professional journals	1	2	3	4	5

NOTE: Thank you for your contribution towards this study.

APPENDIX II

QUESTIONNAIRE FOR SMALL-SIZED BUILDING CONSTRACTORS

Section 1: Respondents Profile

1) Please indicate the Financial Class of your business

a) D1/K1 [ ] b) D2K2 [ ]

c) D3K3 [ ] d) D4K4 [ ]

2) Years of experience in the construction industry?

a) 1-5 [ ] b) 6-10 [ ]

c) 11-15 [ ] d) > 16 [ ]

3) Your highest level of education

a) Basic Education (JSS/Middle School) [ ]

b) Secondary Education (Technical/Vocational/Secondary) [ ]

b) HND [ ]

d) Bachelors [ ]

e) Other .....

4) Who are your major clients?

a) Public bodies [ ]

b) Private individuals or bodies [ ]

c) Both public and private [ ]

d) Others, please specify……..

5) Do belong to any contractors association?

a) Yes [ ]

b) No [ ]

Section 2.0: Capacity-Building Needs of Small-Sized Contractors.

Contextual definition: *Capacity-building Needs are the measures required to help the small-sized contractors to build their capacity.*

A) To what extent do you agree that small-sized contactors face several challenges?

1	2	3	4	5
Very low extent	Low extent	Medium extent	High extent	Very high extent

C) Below are list of possible capacity-needs of the small-sized contractors. Rank these needs on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Highly unimportant	Unimportant	Neutral	Important	Highly important

Capacity-building needs of small-scale building contractors		***1***	***2***	***3***	***4***	***5***
1	I need sub-contracting	1	2	3	4	5
2	I need reservation of government contracts	1	2	3	4	5
3	I need continuous training	1	2	3	4	5
4	I need simplification of tendering processes	1	2	3	4	5
5	I need technical/professional skills	1	2	3	4	5
6	I need accessibility to plant and equipment	1	2	3	4	5
7	I need technological upgrading	1	2	3	4	5
8	I need relaxation of bonding requirement	1	2	3	4	5
9	I need reduction of taxes	1	2	3	4	5
11	I need management skills	1	2	3	4	5
12	I need prompt payment system	1	2	3	4	5
13	I want eradicationof political interference in awarding public contract	1	2	3	4	5
14	I need revision of collateral requirements	1	2	3	4	5
15	I need better transparency in the tendering processes	1	2	3	4	5
16	I want eradication of bribery and corruption	1	2	3	4	5
17	I need small-contractors development policies	1	2	3	4	5
18	I need business advisory services	1	2	3	4	5
19	I need financial supports	1	2	3	4	5
	I need long term loans					

Section 3.0: Benefits obtainable from the sub-contracting by the small-sized contractors under a Management Contractor.

Contextual definition: *Benefits are the capacity-building interventions obtainable by the small-sized contractors from subcontracting under a management contractor.*

A) How would you rate the importance of sub-contracting towards the capacity-building of small-sized contractors?

1	2	3	4	5
Very unimportant	unimportant	Neutral	Important	Very important

B) Below are list of possible benefits which are obtainable from sub-contracting by the small-sized contractors who work as sub-contractors under Management Contractor (Large-sized contractor). Rank these benefits on a scale of 1-5 by circling/ticking your choice for each answer.

1	2	3	4	5
Highly unbeneficial	Unbeneficial	Neutral	Beneficial	Highly beneficial

	Benefits of sub-contracting relationship	***1***	***2***	***3***	***4***	***5***
1	Mentoring (input)	1	2	3	4	5
2	Acquisition of managerial skills (Output)	1	2	3	4	5
3	Improved technical capabilities(Output)	1	2	3	4	5
4	Lending of equipment (Input)	1	2	3	4	5
5	Better supervision (Input)	1	2	3	4	5
6	Facilitating technology transfer (Input)	1	2	3	4	5
7	Creating job opportunities (Input)	1	2	3	4	5
7	Raising credit-worthiness/rating (Output)	1	2	3	4	5
9	Providing financial support (Input)	1	2	3	4	5

NOTE: Thank you for your contribution towards this study.