

**AN EVALUATION OF CORE COMPETENCE OF FOREIGN BUILDING
CONTRACTORS IN CREATION OF COMPETITIVE ADVANTAGE IN THE
CONSTRUCTION INDUSTRY OF TANZANIA**

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M.Sc. (Construction Economics and Management) Dissertation

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CONTRACTORS IN CREATION OF COMPETITIVE ADVANTAGE IN THE
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**Dissertation submitted in partial fulfillment of the requirements for the award of the
Master of Science Degree in Construction Economics and Management of the Ardhi
University**

School of Construction Economics and Management

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Dar Es Salaam

November, 2016

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for acceptance by the Ardhi University a dissertation titled “**An evaluation of core competence of foreign building contractors in creation of competitive advantage in the construction industry of Tanzania**” for partial fulfillment of the requirements for the degree of the Master of Science in Construction Economics and Management of the Ardhi University

.....

Dr. Herriet Eliufoo

(Supervisor)

Date:

DECLARATION AND COPYRIGHT

I, HAMISI Isihaka, hereby declare that, this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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DEDICATION

I dedicate this work to my beloved wife Khadija Dotto and our son Rostam Isihaka for their continuing support and patience through my study journey

ABSTRACT

For a long time, foreign contractors have dominated construction business in Tanzania. Foreign contractors who constitute less than 1.28% of all registered building contractors in the country execute about 63.42% of large and medium-sized contracts (CRB, 2015). These foreign contractors come and go depending on the business climate, which dictates work opportunities.

According to CRB as of 20th November, 2015 the board had processed a total of 2,800 applications for project registrations. The total value of the registered projects was TZS 3.6 Trillion of which 63.42% by value was carried out by Foreign Contractors and the remaining 36.58% by Local Contractors. Foreign Contractors still dominate the construction market in Tanzania as per the value of projects registered to CRB 94.72% of all registered projects are undertaken by Local Contractors while only 5.28% are undertaken by Foreign Contractors. The Foreign Contractors execute very few projects but the values of such projects are very high and this is an area of contention between local and foreign contractors (CRB, 2015).

The main objective of this research was to evaluate the core competence of foreign building contractors as a means of creating competitive advantage and to propose ways on how their core competence can be used as a learning experience to local building contractors in the construction industry of Tanzania.

To understand factors attributing to the foreign contractors exceeding in the execution of valued construction projects, this study aims to evaluate the core competence of foreign building contractors that gives them a competitive advantage during bidding and project execution. This

knowledge gap of core competence has been not well researched in terms of Guanxi (relationship) resources and reputation, project management competences, and financial capabilities in bidding and execution of construction works for foreign contractors in the construction industry of Tanzania.

Based on the questionnaire analysis of the specific objectives therefore, it can be concluded that:-

The first specific objective was to assess the relationship resource and reputation factors as a means of core competence in creation of competitive advantage to foreign building contractors.

For relationship resource factors, the overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant relationship resource factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are; Relationship between contractors and clients, Relationship between contractors and consultants, and Relationship between contractors and suppliers.

For reputation resource factors, the overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant reputation resource factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are; Timely completion of jobs in satisfying manner, Positive manner in resolving problems, Good past experiences, Good relationship with suppliers, and Satisfying customer demands.

The second specific objective was to assess the project management competence factors as a means of core competence in creation of competitive advantage to foreign building contractors. The overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant project management competence factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are; Contract management, Schedule management, Quality management, Quality management, and Procurement management

The third specific objective was to assess the financial capability factors as a means of core competence in creation of competitive advantage to foreign building contractors. The overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant financial capability factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are; Good cash flows,

Adequate accessibility to financial institutions, High construction material inventory/stock, and
Good credit facilities.

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LIST OF ABBREVIATIONS AND ACRONYMS

CRB	Contractors Registration Board
CREC	China Railway Engineering Corporation
HQCEC	China Huangiu Contracting and Engineering Corporation
IT	Information Technology
IRCS	Important Resources and Competences
RII	Relative Importance Index
SCG	Shangai Construction Group
TZS	Tanzania Shillings

CHAPTER ONE

1.0: INTRODUCTION

1.1: Background Information

Contractors can be defined as a body or independent business people who are hired to perform specific tasks (Gunawan & Kleiner, 2005). Competitive advantage means providing advantage over competitors by offering consumer greater value either through lower price or by providing more benefits that justify higher price (Armstrong *et al.*, 2004). Christensen (2010) defines competitive advantage as possessing whatever value a business can provide that motivates its customers to purchase its products or services rather than those of its competitors and that poses impediments to imitation by actual or potential direct competitors. From the definition, it is learnt that competitive advantage requires effective integration of several different types of information, gathered and processed in different organizations departments and at different organizations (Ali, and Mansor, 2012). The key for winning and keeping target customers is to understand their needs better than competitors do and to deliver more value. When a firm can do something that rival firms cannot do, or own something that rival firm's desire, that can represent a competitive advantage. Getting and keeping competitive advantage is essential for long term success in an organization (David, 2005).

Porter (1980) defined three generic, competitive strategies overall cost leadership, differentiation and focus. Differentiation is possible only until selection has taken place; thereafter competition is on price alone. For a contracting firm to be differentiated from its competitors, it can adopt one or more forms of competitive advantage strategic management in construction, bidding strategy,

technological and organizational innovation, technology strategy, strategic planning, and strategic alliances. Competitive advantage strategy is a way to find competitive positions in industry, as basic compete to form benefits position and continuously (Porter, 2004). Competitive advantage is the essence for success or fail of the company.

In today highly competitiveness environment, business organizations need to act fast in order to secure their financial situations and their market positions. Firms are continuously striving for ways to attain a sustainable competitive advantage. They need to count more on their internal distinguished strengths to provide more added customer value, strong differentiation and extendibility; in other words count more on their “core competences”(Hamel & Prahalad, 1994). Therefore, strategy has to move from competing for product or service leadership to competing in core competence leadership. The core competence has to be a primary factor for strategy formulation as it is an important source of profitability. Scholars have acknowledged the importance of the core competence concept by suggesting core competence models to sustain competitive advantage (Petts, 1997; *Hafeez et al.*, 2002). One stream of research suggests core competencies to be at the base of all competitive advantage (Srivastava, 2005).

A core competency is about the knowledge on successes or failures in recommending knowledge resources (Banerjee, 2003); even some researchers define Core competence in short straight-forward words: “it is the ability to operate efficiently within the business environment and to respond to challenges” (*Chen, et al.*, 2007: 159) linking its definition directly with performance. Companies are likely to be different in terms of their abilities to select, build, deploy, and protect this core Competencies. These differences are likely to yield differences in corporate performance (Hamel, 1994). The concept of core competence has been developed to support

more efficient identification and utilization of an organization's strength. The assumption is that core competencies change more slowly over time than products and markets, and are cumulative (Gupta et al., 2009).

The concept of core competence has implications at the strategic level; the firms should systematically work upon identifying their core competencies and developing them for sustainable competitive advantage (Srivastava, 2005). It has also been suggested that the theory of competence-based competition argues that core competencies are the source of sustainable competitive advantage. Core competencies are valuable capabilities those are collective and unique in their characteristics, as well as strategically flexible contributing toward the success of potential business (Hafeez et al., 2002).

1.2: Statement of Research Problem

For a long time, foreign contractors have dominated construction business in Tanzania. Foreign contractors who constitute less than 1.28% of all registered building contractors in the country execute about 63.42% of large and medium-sized contracts (CRB, 2015). These foreign contractors come and go depending on the business climate, which dictates work opportunities.

As at 04th November 2015, there were 8,198 Registered Contractors of various types and classes. Out of these 3,590 (43.79%) are Building Contractors and 2,996 (36.54%) are Civil Works Contractors. Foreign Contractors constitute only 1.1% (33) of Civil Contractors and 1.28% (46) of the Building Contractors. Local Contractors of class I constitute only 0.96% (29) of Civil Contractors and 2.0% (72) of the Building Contractors. However, the majorities of Local

contractors are in Classes II – VII who constitute (96.71%) of the Building Local Contractors and (97.93%) of Civil Local Contractors. The maximum size of work that such small class contractors can undertake is limited to less than TZS 3,000 million per contract (CRB, 2015) while the maximum size of work that first class contractors can undertake are unlimited. Contractors of class II - VII employ less than ten permanent workers. The percentage of small contractors compares fairly with the situation in other countries such as Japan (77%), United States (93%), Britain (89%), and West Germany (55%) (Kaduma and Msita, 1999).

According to CRB as of 20th November, 2015 the board had processed a total of 2,800 applications for project registrations. The total value of the registered projects was TZS 3.6 Trillion of which 63.42% by value was carried out by Foreign Contractors and the remaining 36.58% by Local Contractors. Although there is a significant increase in number of applications processed in year 2015 than it was in year 2014, but by value there is a decrease in total project value for year 2015 (TZS 3.6 Trillion) than it was in year 2014 (TZS 12.97 Trillion). Foreign Contractors still dominate the construction market in Tanzania as per the value of projects registered to CRB 94.72% of all registered projects are undertaken by Local Contractors while only 5.28% are undertaken by Foreign Contractors. The Foreign Contractors execute very few projects but the values of such projects are very high and this is an area of contention between local and foreign contractors (CRB, 2015).

To understand factors attributing to the foreign contractors exceeding in the execution of valued construction projects, this study aims to evaluate the core competence of foreign building contractors that gives them a competitive advantage during bidding and project execution. This knowledge gap of core competence has been not well researched in terms of Guanxi

(relationship) resources and reputation, project management competences, and financial capabilities in bidding and execution of construction works for foreign contractors in the construction industry of Tanzania.

1.3: Research Objectives

1.3.1: Main Objective

To evaluate core competence of foreign building contractors as a means of creating competitive advantage in the construction industry of Tanzania and propose ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors.

1.3.2: Specific Objectives

- To assess the guanxi (relationship) and reputation resources as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.
- To examine the project management competences as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.
- To investigate the financial capabilities as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.

- To propose ways of how the core competence of foreign building contractors can be used as a learning experience to local building contractors in the construction industry of Tanzania.

1.4: Research Questions

- i. How do the guanxi (relationship) and reputation resources contribute in creating competitive advantage of foreign building contractors in Tanzania.
- ii. How do the project management competences contribute in creating competitive advantage of foreign building contractors in Tanzania.
- iii. How do the financial capabilities contribute in creating competitive advantage of foreign building contractors in Tanzania.
- iv. How can the core competence of foreign building contractors can be used as a learning experiences to local building towards creating competitive advantage in bidding and project execution in the construction industry of Tanzania.

1.5: Significance of the Study

The significance of this study is to understand the extent of the core competence of foreign building contractors that give them a competitive advantage in the construction industry of Tanzania with regard to valued projects. This will provide basis for learning to contractors including locals in the areas of core competence during bidding and project execution.

1.6: Scope of the Study and Limitations

This study covers only the foreign contractors registered by CRB in building categories of Class I that executes construction works in Dar es Salaam City because most of the building works are being implemented in Dar es Salaam among of them are construction satellite city projects. Also, the number of respondents to be involved during data collection will be limited to foreign building contractors, clients (private and public), and all consultants (Architects, Quantity Surveyors and Engineers).

1.7: Structure of the Report

This dissertation report is organized into five chapters. Chapter one entails the background information, statement of the problem, objectives of the study, research questions, limitations of the study, and organization of the report. Chapter two presents the literature review as well as the conceptual and theoretical framework adopted in this researched work; Chapter three describes in detail the research methodology that will be used in this study. Chapter four presents the data collection analysis, results presentation and discussions and, the last chapter provides the conclusion and recommendations of the study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter provides an overview on existing literatures on the areas of core competence as means of creating competitive advantage for contractors in the construction industry. The forthcoming sections describe concepts of core competences and competitive advantage.

2.2 Conceptualization of Core competencies

A competence is an internal activity that a company performs better than other internal activities.

A core competence is a well-performed internal activity that is central, not peripheral, to a company's strategy, competitiveness, and profitability. While distinctive competence is a competitively valuable activity that a company performs better than its rivals (Macgraw Hill, 1998).

A core competence is one which critically underpins the organization's competitive advantage. Companies can differentiate themselves from their competitors with specific core competences, but often not for long. The differentiation is difficult to sustain and can often be imitated by competitors. The integration (and attainment) of constituent skills, that is the distinguishing mark of a core competence, is achieved and sustained through developing strong dynamic capabilities, particularly in a world of innovation based competition.

Leonard-Barton (1992) defined core competency as one which differentiates a firm from its milieu. According to Sanchez and Heene (1997), core competencies are usually the result of “collective learning” processes and are manifested in business activities and processes. The core competencies are those unique capabilities, which usually span over multiple products or markets (*Hafeez et al., 2002*). Javidan (1998) points out, that core competency is a collection of competencies that are widespread in the corporation. It results from the interaction between different SBUs’ competencies. Core competencies are skills and areas of knowledge that are shared across business units and result from the integration and harmonization of SBU competencies. One useful finding of *Hafeez et al.,(2002)* analysis is that although Company A regards its core business as manufacturing engineering, the core competencies reside in the sales and marketing area. Hamel and Prahalad (1994) contend that “core competencies are the collective learning in the organizations, especially how to coordinate diverse production skills and integrate multiple streams of technologies.” They argue that core competence is communication, involvement, and a deep commitment to working across organizational boundaries (*Gupta et al., 2009*).

Ljungquist (2008) point out, that core competence was originally invented as a tool for justifying business diversification at large companies, and for supporting internal processes such as product development (Prahalad and Hamel, 1990). Scholars have acknowledged the importance of the concept by advancing it in multiple directions: by connecting it to conceptual notions of learning (*Lei et al., 1996*), by suggesting core competence models to sustain competitive advantage (Petts, 1997; *Hafeez et al., 2002*), by building on the concept’s basic notions to invent similar concepts (Sanchez & Heene, 1997; Eden & Ackermann, 2000; Sanchez, 2004), and by developing processes for its identification (Javidan, 1998; Eden & Ackermann, 2000). The importance of the

concept is also acknowledged when testing the implementation of core competence as strategy (Clark, 2000; Clark & Scott, 2000). It is argued that in addition to identifying competences, the critical task is to assess them relative to those of competitors. Although a firm may identify a host of competences that it performs better relative to its competitors, not all competences are “core”. Core competences are those competences which allow firms a superior advantage, and according to Hamel and Prahalad (1994; 1990) to be considered “core” the competence must meet three criteria:

- i. Customer Value: A core competence must make a significant contribution to Customer perceived value.
- ii. Competitor Differentiation: Any competence across an industry cannot be defined as core unless the firm’s level of competence is superior to all its competitors and should be difficult for to imitate.
- iii. Extendibility: The competence must be capable of being applied to new product arenas.

Customer Value: A core competence must make a significant contribution to Customer perceived value. Core competences are the skills that empower a firm to provide a fundamental value and customer benefit. However, although a competence must make an important contribution to customer perceived value, it does not imply that the core competence will be visible or easily understood by the customer. What is visible to the customer is the benefit, not what made that benefit possible. Sony’s competence to miniaturize, for example, provides consumers with an array of small, portable electronic products which is desired by the customer is a small or pocket-sized Electronic gadget while the competence required to produce the mechanism is of little interest to the consumer. Hamel and Prahalad (1994) however, must point

out an important exception to this rule of customer value, the process and manufacturing related competences that yield sizable cost savings to the producer may also be considered core competences, even when little or none of the cost benefits are passed on to the customer.

Competitor Differentiation: In order to be qualified as a core competence, the capability or skill set must be competitively unique, like Barney. Any competence across any industry cannot be defined as core unless the firm's level of competence is superior to all its competitors. Additionally, the core competence should be difficult to imitate.

Extendibility: The competence must be capable of being applied to new product arenas. The skill set or technology must be capable of being abstracted from the product configuration it is currently embedded in and be applied to new products in new markets. In other words, a core competence must provide access to a wide variety of markets. For example, Honda's engine expertise enables it to participate in such diverse industries as automobiles, motorcycles, off-road buggies and lawnmowers. As a practical matter, this means that in defining core competences, managers must strive to avoid a product -oriented view of the firm's capabilities.

Drawing together the literature on core competence, seven critical properties can be identified that transform generic corporate competences into the core competences of a particular company (Goddard, 1997: 43-52):

- i. They are imbued with experiential or tacit knowledge that competitors would find it impossible to replicate; thus, they are not simply products, functions or assets.

- ii. They define what the company does better than, or differently from, any other company and therefore the source of whatever success it enjoys; thus, they are definable only in relation to the competence of all other companies.
- iii. They are embedded in the organization's modus operandi as though the company was "wired up" to operate at a level of "intelligence" greater than that of the sum of its people; thus, they do not reside simply in the minds of a small number of highly talented stars but find day-to-day expression in the behavior of everyone in the firm.
- iv. They are rare, limited perhaps to two or three activities in the value chain, namely those that are most critical to the firm's future success; thus, they are not synonymous with the entire activity set performed by a company.
- v. They are the source of the company's ability to deliver unique value to its customers; thus, they are not to be mistaken with "leading-edge technologies", "world-class processes", or other "production-driven" definitions of distinctiveness.
- vi. They are flexible enough to straddle a variety of business functions, product families, and technologies; thus, they are not tied to existing ways of doing business but are platforms for growth - and stimuli for growth.
 - i. They also define the unique opportunity set available to the firm, being those market openings or knowledge gaps that the company is uniquely qualified to fill; thus, they serve to narrow the focus of the firm's forward strategy.

Most authors have focused on three dimensions of core competence, they are: shared vision, cooperation and empowerment (Sanchez, 2004; *Hafeez et al.*, 2002; Javidan, 1998; King & Zeithaml, 2001; Hafeez & Essmail, 2007). Shared vision is defined as a firm's interest in sharing the organization's view of goals, objectives, policies, priorities, and expectations (*Santos-Vijande*

et al., 2005). It is essential to guarantee learning to occur in the same direction and to motivate that it really takes place. Firms with greater shared vision likely enhance to business excellence and success. Then, firms seem to utilize the shared vision to build innovative products and services and fulfill customer and market requirements (Ussahawanitchakit, 2008). Cooperation is also a key factor that plays a role in the development of core competence. Cooperation is a joint behavior toward a particular goal of common interest that involves interpersonal relationships (Croteau *et al.*, 2001). Cooperation as a core competence knows when and how to attract, reward, and utilize teams to optimize results. Acts to build trust, inspire enthusiasm, encourage others, and help resolve conflicts and develop consensus in creating high performance (Berger *et al.*, 2004). Empowerment is a process or psychological state manifested in four cognitions: meaning, competence, self-determination, and impact. Specifically, meaning concerns a sense of feeling that one's work is personally important (Zhang & Partol, 2010). Empowering tends to enhance the meaningfulness of work by helping an employee understand the importance of his or her contribution to overall organizational effectiveness.

2.3 Competitive Advantage

The industry is changing constantly due to the developments of new business methods and technologies. Thus, construction companies have to adopt various applications and develop appropriate strategies to be more competitive in this industry and becoming successful in their businesses. Competitive pressures, both in domestic and global markets, shifted the desired outcomes in management of the relationship away from compliance and quiescence in employee behavior toward a more positive commitment towards customers and business requirements. Construction organization has tended to shed labour as part of a survival strategy, retaining and

retraining the more skilled employees or those whose skilled employees could less easily be replaced (Mullins, 1999).

If a firm possesses resources and capabilities which are superior to those of competitors, then as long as the firm adopts a strategy that utilizes these resources and capabilities effectively, it should be possible for it to establish a Competitive advantage. The sustainability of competitive advantage depends on three major characteristics of resources and capabilities: Durability; which is the period over which a competitive advantage is sustained, Transferability; the harder a resource is to transfer the higher sustainable the competitive advantage, and finally Replicability; means cannot be replicated or purchased from a market (Sadler, 2003).

A competitive advantage is meaningful if it is related to an attribute valued by the market. Customers need to perceive a consistent difference in important attributes between the producer's products or services and those of its competitors. These differences must relate to some product/delivery attributes which are among the key buying criteria for the market.' Product/delivery attributes are those variables that impact the customers' perceptions of the product or service, its usefulness and its availability. Some examples of such attributes are product quality, price and after-sale service. Key buying criteria are those variables and criteria that customers use in making their purchase decisions. They are different for different industries and different market segments (*Javidan, 1998*). *Gupta et al. (2009)* point out, that resources alone are frequently not enough to generate competitiveness over other firms. In creating a competitive advantage, a firm needs the ability to make good use of resources – defined as the capability to handle a given matter – and, as the ability grows over time, to utilize the available resources to create new resources, such as skills (through new technology or software application), or to open

new doors to the development of new types of product. “A firm is said to have a competitive advantage when it is implementing a value creating strategy not simultaneously being implemented by any current or potential player” (*Clulow et al., 2003*).

To gain competitive advantage a business strategy of a firm manipulates the various resources over which it has direct control and these resources have the ability to generate competitive advantage (*Rijamampianina, et.al, 2003*). Superior performance outcomes and superiority in production resources reflects competitive advantage (*Lau, 2002*). Most authors have focused on two dimensions of Competitive advantage: Flexibility and Responsiveness (*Evans, 1993; Krajewski & Ritzman, 1996; Macmillan & Tampo, 2000*). Flexibility defined as the firm's intent and capabilities to generate firm-specific real options for the configuration and reconfiguration of appreciably superior customer value propositions (*Johnson et al., 2003*). Responsiveness refers to the firm's ability to respond quickly to customer needs and wants (*Carlos et al., 2010*)

2.4 Participation of Local and Foreign contractors in construction industry of Tanzania

The Contractors Registration Board (CRB) was established in 1997 under the Contractors Registration Act No. 17 of 1997 for the purpose of registration, regulation and promotion of contractors in Tanzania. The Board deals with all types of contractors and the main categories include Building, Civil Works, Mechanical, Electrical and Specialist Works. The main objective of the CRB is to ensure that competent contractors who observe business ethics and care for the quality of work, the environment and the safety of their workers and the public at large serve the construction industry.

According to Contractors Registration Board (CRB) there are two main categories: Local Contractors and Foreign Contractors. Local Contracting firms are those whose majority shares are owned by citizens of the United Republic of Tanzania. Firms not meeting these criteria will be registered as a foreign one. In Tanzania all foreign contractors are registered as class I contractors while local contractors are registered from class I up to class VII.

As at 04th November 2015, there were 8,198 Registered Contractors of various types and classes. Out of these 3,590 (43.79%) are Building Contractors and 2,996 (36.54%) are Civil Works Contractors. Foreign Contractors constitute only 1.1% (33) of Civil Contractors and 1.28% (46) of the Building Contractors. Local Contractors of class I constitute only 0.96% (29) of Civil Contractors and 2.0% (72) of the Building Contractors. However, the majorities of Local contractors are very small Classes II – VII who constitute (96.71%) of the Building Local Contractors and (97.93%) of Civil Local Contractors. Table 2.1 shows the registered contractors by type and category as of 4th November, 2015.

Table 2.1: The registered contractors by type and category as of 4th November, 2015

Type	Class									Total
	I			II	III	IV	V	VI	VII	
	L	F	Total							
Building	72	46	118	45	59	238	676	650	1804	3590
Civil	29	33	62	18	49	191	558	1012	1106	2996
Electrical	25	20	45	7	9	53	150	82	303	649
Mechanical	8	10	18	1	4	12	28	38	44	145
Specialist Building	10	5	15	8	8					31
Specialist Civil	15	18	33	28	165					223
Specialist Electrical	39	16	56	84	128					268
Specialist Mechanical	49	32	81	66	149					296
GRAND TOTAL	247	180	427	257	571	494	1412	1782	3257	8198

Source: CRB, 2015

The maximum size of work that such small class contractors can undertake is limited to less than TZS 3,000 million per contract (CRB, 2015) while the maximum size of work that first class contractors can undertake are unlimited. Such small class firms employ less than ten permanent workers. The percentage of small contractors compares fairly with the situation in other countries such as Japan (77%), United States (93%), Britain (89%), and West Germany (55%) (Kaduma and Msita, 1999). Table 2.2 shows the class limits for various types of contractors in Million TZS.

Table 2.2: The class limits for various types of contractors in Million TZS

Class	Civil	Building	Mechanical	Electrical	Specialist
One	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited
Two	5,000	3,000	2,000	2,000	400
Three	3,000	2,200	1,200	1,200	150
Four	1,500	1,200	600	600	
Five	750	600	300	300	
Six	300	200	150	150	
Seven	150	120	75	75	

Please Note: Class Limit = Cost of Labour + Cost of Materials + Applicable Taxes

Source: CRB, 2015

According to CRB as of 20th November, 2015 the board had processed a total of 2,800 applications for project registrations. The total value of the registered projects was TZS 3.6 Trillion of which 63.42% by value was carried out by Foreign Contractors and the remaining 36.58% by Local Contractors. Although there is a significant increase in number of applications processed in year 2015 than it was in year 2014, but by value there is a decrease in total project value for year 2015 (TZS 3.6 Trillion) than it was in year 2014 (TZS 12.97 Trillion). Foreign Contractors still dominate the construction market in Tanzania as per the number of projects registered to CRB 94.72% of all registered projects are undertaken by Local Contractors will only 5.28% are undertaken by Foreign Contractors. The Foreign Contractors execute very few projects but the values of such projects are very high and this is an area of contention between local and foreign contractors.

2.5 Areas of Core Competence for contractors

There are main five Important Resources and Competencies (IRCs) in construction industry. The five main IRC variables include: guanxi resources (relationships), technological and innovative capabilities, financial capabilities, project management competencies, and reputation (Cheah, C et. al., 2006).

2.5.1 Guanxi (Relationship) Resources

Some researchers (Zhu and Hu, 2001; Chen, 1998) reported that the industrial environment of the construction industry in China has a high degree of institutional uncertainty. Some examples include a lack of fully developed legal and regulatory systems, excessively bureaucratic administrative procedures, inconsistent regulations that vary with hierarchies and regions, and a lack of legal enforcement and supervision. To reduce some of these uncertainties, Park and Luo (2001) suggested that firms in China may turn to guanxi with related parties in the so-called ‘task environment’ (for an interesting discussion on the guanxi phenomenon in China, readers may refer to Tsang (1998)). Indeed, all the case study companies in China have established guanxi with government or regulatory bodies, clients, financial institutions, research institutes, subcontractors and suppliers.

2.5.2 Technological and innovative capabilities

Technology is the knowledge of how to do or make something which yields benefits to users, that ability is an asset (Stern & Eovaldi, 1984). The possession of technology is the price of entry in

all business sectors. Its development important to the maintenance of competitive position in most and in fact for some it is the key to competitive advantage (Frahman, 1982). Technology has contributed to the improvement of manufacturing for many years. The introduction of computer in business have dramatically improved the quality and speed of the production and reduced cost (Everald & Burrow, 2004) Apart from that, the introduction of IT as tools to improve communication between project team and suppliers as a medium for quality control of overall project deliveries (Verweij & Voorbij, 2007). The tool will radically improve collaboration and integration between design, manufacturing and assembly process (Jaeger, 2007). In fact the function of technology strategy for a construction company is wide (Tatum, 1988). He further suggests three strategic choices for technology development can be adopted by construction companies; namely pioneer versus follower, outsourcing versus internalizing, and technical/ basic research versus advanced / application research (Tatum, 1988).

Technological innovation can contribute to the growth in market share through the provisions of new or improved products and services and the reduction in construction costs (Slaughter, 1998).

Most of the case study companies have the following features in common:

- i. Process innovation and product innovation constitute two primary types of innovation;
- ii. Internal exploration as well as external collaboration with domestic and international research institutes are the modes of innovation;
- iii. Technology and innovation centres are set up to absorb, introduce, spread and evaluate new technologies;
- iv. Sufficient funds are allocated for innovative studies in most of these firms, the R&D expenditure amounts to 0.5%–1% of the total revenue;

- v. All employees are encouraged to take part in the innovation process by providing training and various incentive mechanisms;
- vi. Technical database and IT systems are set up to facilitate collection of data from different sources;
- vii. Innovation in technologies is promoted as a core value of corporate culture.

2.5.3 Financial capabilities

In the Chinese construction industry, there is a serious lack of financial resources and channels to many construction companies (Chen, 1998). Therefore, the ability to acquire financing from banks or other financial institutions is one major capability that needs to be developed. In China, this ability can be fostered by building up *guanxi* with financial institutions or by raising capital as publicly listed firms. Another type of financial capability that has been identified is a company's foresight in making strategic investments and project investments. Companies often pursue long-term strategic investments in related market segments and industries. For example, China Non-ferrous Metal Mining and Construction (NFC) adopts a '4-3-2-1' strategy, with 40% of the company's capital invested in its main businesses (nonferrous metal exploration, mining and construction), 30% invested in real estate, 20% invested in financial institutions (e.g. as shareholders of China Minsheng Bank and Minsheng Insurance Company) and the remaining 10% invested in other diversified areas.

Other than strategic investments, some companies also invest their equity directly in some projects in order to seek a return that is higher than what the conventional scope of engineering and construction works could offer. A good example of this is the investments made in build

operate transfer (BOT)-type of projects. The third type of financial capability is financial management. Relevant activities would include setting up a total budgeting system, enhancing financial information reporting systems, internal auditing, tracking working capital requirements and rate of circulation. The proper implementation and management of these activities will also lead to cost leadership. With a strong financial management system, a firm can track all its cost components more effectively and create greater accountability (Cheah. C. Y. J, Kang. J, and Chew. D A. S., 2006).

For a sustainable future of a construction firm, strong and sound financial condition is a prerequisite condition. Poor financial condition is usually attributed to poor tender pricing, poor cost control, poor project management, lack or poor business plans, lack of audited reports, incompetent company management, etc. It is therefore important to address the above issues. The problem of weak capital base especially among local contactors of lower classes continues unabated. This is compounded by strict conditions imposed by financial institutions when applications for credits and loans are submitted (CRB, 2003).

Access to credit has also remained a challenge to the contractors. Banks and other Institutions prefer to offer credits to trading firms which have a more predictable cash flow than to construction business. Due to uncertainty in the job availability and erratic payments by clients the projected cash flows are usually not met hence frustrating the credit systems (CRB, 2003).

2.5.4 Project management competencies

As a matter of fact, this IRC variable requires less elaboration in view of its fundamentality to the construction business. Put simply, strong project management competencies would ensure that a project is completed on time, within budget and with a desirable level of quality. In most construction companies, project management remains a key function, and the main activities include schedule management, cost management, quality management, contract management and procurement management. Project management competencies are usually supported and cultivated jointly by IT strategy, human resource strategy, organisational structure and culture four of the nine strategic fields and mechanisms in Cheah and Garvin's (2004) framework for corporate strategy in construction.

2.5.5 Reputation

Reputation builds strategic value for a company by granting it a competitive advantage against rival. For instance, companies try to outdo rivals by being the first to market new products, to hire the best job candidates and to show profitability. By doing that, it gains reputation and good reputation can mean higher sales. For an example, picking the low bidder was once a common practice, now the inclination is to rely on word of mouth and reputation as the basis for selecting a service provider as contractor's reputation acts as an equalizer (Fombrun, 1996). In other words, the contractor's reputation acts as a warranty that they will meet client's expectations.

Murray et al. (2003) described that reputation can be considered as a business threat nowadays. This is proved by the recent incident where Jarvis, a construction service provider based in UK

has made a decision to hand back its railway maintenance contracts. The decision was made based on the evaluation of its profit and reputation being damaged by the train accident of Potters Bar crash on 10 May 2002 and derailment at Kings Cross station in London on September 2003. The debacle not only did cost the company money in loss of contract, but it temporarily eroded its valuable reputation. The market value of the company fell by close to 90 percent since the start of 2004 (BBC News, 2 July 2004).

A reputation is something that sticks with a contractor for years. It takes years of reliable work, many satisfied customers and enduring relationships with suppliers to build up a good reputation. The contractor has many references, has testimonials from past customers who had projects like yours and exhibits a history of pleasing his customers and completing his jobs in a satisfactory manner. Any problems that may have arisen have been resolved in a positive manner

Oxford Advanced Learner's Dictionary (2000) defined corporate as "connection with a large business company". Fombrun (1996) defined corporate reputation as "the overall estimation in which a company is held by its constituents," through perceptual representation of a company's past actions and future prospects when compared with other leading rivals. It is a collection of perceptions and beliefs (Rayner J., 2003). Reputation confers clear-cut advantages and privileges on companies. It proves difficult to imitate. At the same time, reputation creates responsibilities, whereas an obligations that managers and companies must fulfill, for instance, meeting the personal standards of employees, the quality standards of customers, the ethical standards of the community, or the profitability standards of investors. As a result, companies sustain their reputations by building strong and supportive relationships with all of their constituents (Fombrun, 1996).

Corporate reputation is an invaluable intangible asset. It may even produce long-term competitive advantage and shareholder value (Fombrun, 1996; Gray and Balmer, 1998). Corporate reputation can impede rivalry, enhance the legitimacy to operate and serve as a protective shield against downturns and crises. It could also result in price premiums for products and projects and create additional leverage in negotiations with suppliers and creditors. For example, the reputation of HQCEC, NFC, Sinohydro, CREC and SCG is mainly derived from high quality projects and advanced technologies. Quality management is obviously related to project management competencies, whereas advanced technologies are built up by having strong technological and innovative capabilities. This also illustrates that the IRC variables are not totally independent, but can be mutually supportive.

Therefore, construction companies could achieve better performance by building up their strength in several Important Resources and Competencies (IRCs). These IRC variables may include guanxi resources, technological and innovative capabilities, financial capabilities, project management competencies and reputation (*Cheah, C, et. al., 2006*).

2.6 Conceptual and Theoretical Framework

2.6.1 Conceptual Framework

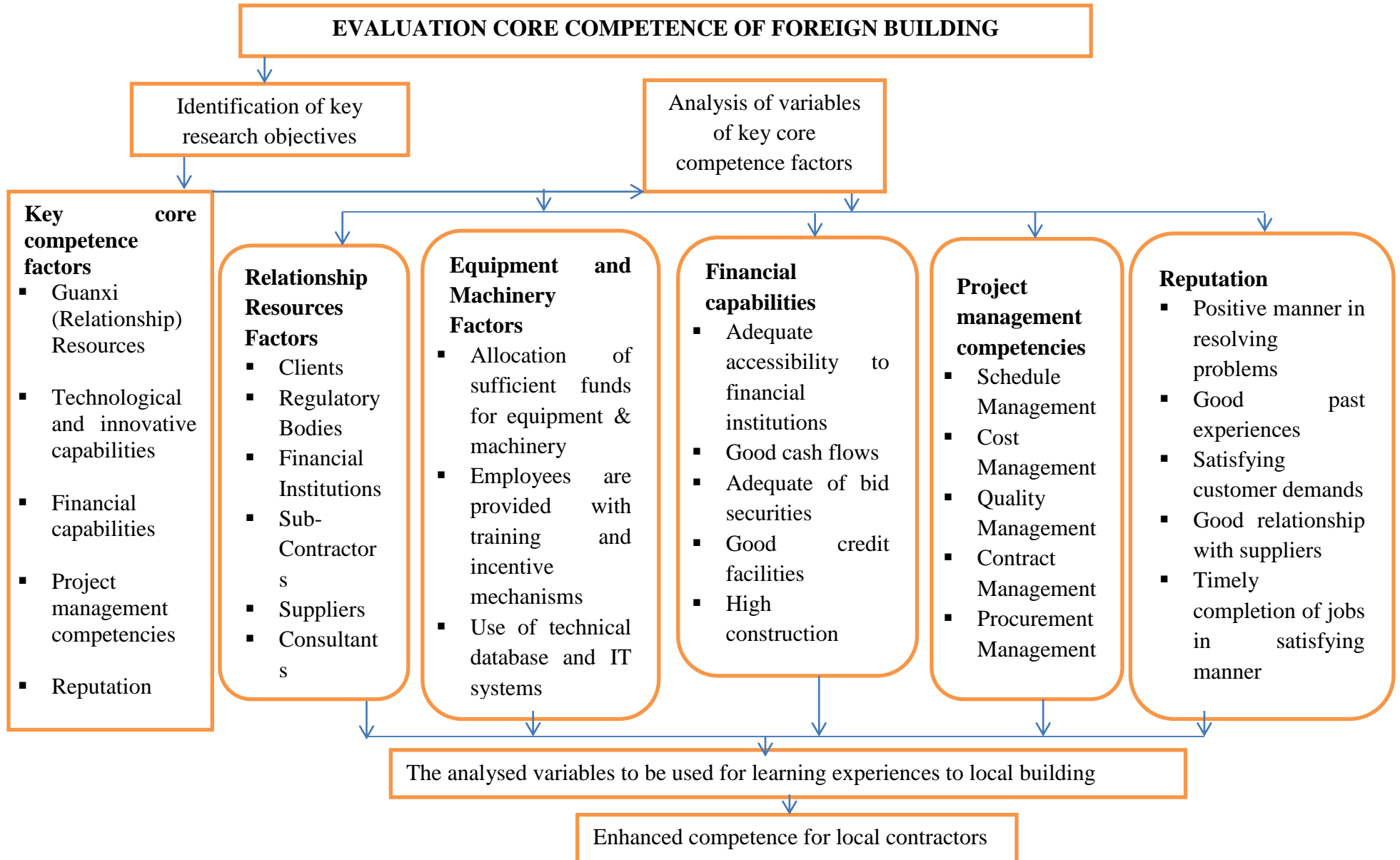
The conceptual framework of this research study is to make an evaluation of core competence of foreign building contractors in creation of competitive advantage in the construction industry of Tanzania. According to *Cheah, C et. al., (2006)*, there are main five Important Resources and Competencies (IRCs) factors in the construction industry. The five main IRC variables include: guanxi resources (relationships), technological and innovative capabilities, financial capabilities, project management competencies, and reputation.

Furthermore, for each five IRC factors there are variables forming those factors as shown in Figure 2.1. Generally the combination of the IRCs and the respective variables used to be the core competence factors for foreign building contractors in creation of competitive advantage during tendering and execution of building works in the construction industry of Tanzania.

2.6.2 Theoretical Framework

The main issue here is to evaluate the core competence factors of the foreign building contractors in creation of competitive advantage during tendering and execution of building works and to propose ways on how their core competence can be used as a learning experience to local building contractors in the construction industry of Tanzania.

Figure: 2.1: Conceptual and Theoretical Framework of Evaluation Core Competence of Foreign Contractors



2.7 Chapter Summary

The literature reviews has provided the researcher with the knowledge of core competence in creation of competitive advantage in the construction industry. The first part of this chapter, explains the conceptualization of core competence, second part explains about competitive advantage, the third part explains about the participation of foreign and local contractors in the construction industry of Tanzania and the forth part explains about the areas of core competence for contractors in the world wide construction industry, lastly the fifth part explains the conceptual and theoretical framework.

CHAPTER THREE

3.0 RESEARCH DESIGN AND METHODOLOGY

3.1. Introduction

This chapter describes the research methodology and procedures applied in achieving the aims and objectives of this research. Within this chapter a selection of available research methods is reviewed and the selected on justified. The data needed for this research was obtained from two principal sources which are literature reviews and questionnaires survey. This chapter will also consider the issues of the questionnaire design, sampling, data collection and data analysis.

3.2 Research methods

Research methodology refers to the principals and procedures of logical thought processes which are applied to a scientific investigation (Fellows and Liu 2003 p.3) therefore, when undertaking research, it is important to choose the right methodology, to ensure that the research aims and objective can be achieved and that the results and findings can be validated. In general two research methods appear to dominate the study of core competence in construction industry, Quantitative or Qualitative research methods both research methods involve a systematic collection of data through the use of structured interviews or questionnaire survey.

According to Fellows and Liu (2003), the quantitative method is an objective measuring of the problem. It investigates facts and tries to establish the relationship between those facts with

theories. Scientific techniques are used to obtain numerical data from which its analysis yields quantified results. Conclusions are derived from the assessment of the results in the light of the theory and literature. The qualitative method is a subjective assessment of situation or a problem and takes the form of an opinion, view, perception or attitude of the population sample on the research questions. It is based on the belief that there is no one single reality; everyone has different perception of reality, which makes everyone construct meaning in different ways. It involves narrative data collection in order to gain insights into phenomena of interest. These data are subjective, contain many uncertainties, and vary with the perceptions of the participants. Therefore, the objectivity of the qualitative data is often questioned, and the results and findings of the qualitative study are representative of the study's participants only and are not generalized. In addition to that the analysis of such data is difficult than quantitative data because they require more sorting and filtering to make them suitable for analytical techniques.

For the purpose of this study and because of its exploratory nature, a qualitative research method was selected in the lieu of other research methods for the following reasons:

- Core competence in construction industry is a complex subject and qualitative research method plays an important role in investigation and analysis phenomena of interest.
- It subjectively measures the opinion, views and perception of the population sample on the research questions of the phenomena of interest.
- It enables the research to gain insight understanding of the research subject from the perception of the construction practitioners.

- Utilizing questionnaire survey is more economical, as compared to other methods such as interviews, and having the advantage of rapid collection of data.
- Core competence in construction industry is also a topic that poses serious problem for quantitative methods. There is not sufficient information available to use the quantitative measures and experimental design.

However, the disadvantages of this method include; low response rate time consuming, respondent's abilities to answer the questionnaire and it can be ignored easily as a junk mail.

3.3 Secondary Data Collection

A comprehensive literature review as described in the previous chapter was performed to derive 4 items including definitions of core competence, competitive advantage, areas of core competence for contractors, effects of core competence for contractors and measures for enhancing core competence for local contractors. The literature review was conducted through library reference books, international construction and management journals, conference proceedings, thesis dissertations and the internet. However, it is appeared that there is a significant amount of information on the subject of the study available in the related literatures. The international construction and management journal were of significant interest and provided very useful information on the subject of matter and helped to widen the researcher's knowledge and create an awareness of other issues that might not otherwise have been taken into consideration and also providing more understanding in the following topics:

- Areas of core competence for contractors,
- Ways on how core competence of foreign building contractors can be used as a learning experience to local building contractors in the construction industry of Tanzania.

Based on the literature review a selection was done to match the suitability to the Tanzania construction industry as the previous studies were conducted for other countries. As a result 4 areas of core competence for contractors that contribute to competitive advantage were identified that are Guanxi (relationship) resources, financial capabilities, project management competences, and reputation. The outcome of this review was used to develop a survey questionnaire in order to collect data from the targeted respondent's i.e. the Clients, the Consultants and the Foreign Contractors involved in the large construction projects in Tanzania. However, it was also essential to give an overview of the Tanzania environment where the survey was carried out before examining the main subject. Background information on Tanzania, the economic conditions, environment and the Tanzania construction industry were presented in Chapter 2.

3.4 Design Interview Questions

The aim of this research is to evaluate the core competence of the foreign contractors in creation of competitive advantage in the construction industry of Tanzania. To address the research problem, the research has to achieve the objectives by collecting relevant data from different sources to understand the in depth identified areas of core competence for the case of Dar es Salaam City. The design of the questionnaire was based on the literature review, particularly the areas of core competence in creation of competitive advantages.

A structured questionnaire is utilized in this study. The questionnaire was designed to meet the aims and objectives of this study as stated in Section 1.3 of Chapter 1.

A questionnaire survey is developed to identify and rank the most important areas of core competence, their effects and enhancement measures and to assess the perceptions of clients, contractors and consultants of the relative construction projects in Tanzania. In addition, it was expected that the respondents' knowledge and experiences would differ from one another and that this might have an impact on their answers so attention was paid to address this point in construction the questionnaire.

The questionnaire consisted of closed and open ended questions. In order to present the questionnaire in a systematic way, it was structured in 4 parts A, B, and C each of which containing the appropriate questions to obtain the relevant data needed to achieve the objectives of this study. See Appendix I.

In this study, instead of using the Likert's scale of four ordinal measures a scale from (1) to (4) adopted due to its simplicity and suitability for evaluating each answer and also to ensure that the respondent do not simply select scale number (3) which denotes the average.

This first page of the questionnaire includes a brief statement of the objectives of this study and proving respondents with instructions for completing the questionnaire together with statement of confidentiality and anonymity regarding the survey to establish trust between the respondents and researcher.

- **Part- A Respondent's and Company's General Details**

This part was designed to obtain general information about the companies and the background information about the respondents. It contains general questions about the types of organization the respondent's position in the company, their profession, qualifications and period of experience in construction projects and type of work, experience of the company in the construction industry and the size of projects in which the respondent has participated and the range of project cost involved etc.

- **Part - B Areas of core competence for contractors**

This part was related to identification of areas of core competence for contractors that contribute to competitive advantage in the construction projects from the perspective of clients, consultants and contractors. It includes a list of 5 areas of core competence. These factors were categorized into 5 groups according to the areas of core competence.

The respondents were asked to rate each factor according to level of contributing utilizing a 4 point Likert's ordinal scale ranging from one (1) low contributing to four (4) very high contributing. The respondents were also asked to highlight their recommendations to improve the performance of the Tanzania Construction Industry through an open ended question at the end of part B of the questionnaire.

- **Part- C : Proposals on ways of how the core competence of foreign building contractors can be used as a learning experience to all building contractors**

The purpose of this section was to identify the most effective ways on how the core competence of foreign building contractors can be used as a learning experience to all building contractors. This part was an open ended question of which respondents were allowed to propose several ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors according to their own knowledge and working experience with foreign building contractors in the Tanzania construction industry.

3.5 Sampling Design

A sample design is a definite plan for obtaining a sample from a given population. The research is an evaluation of core competence for foreign contractors in a creation of competitive advantage in the construction industry of Tanzania. Therefore the study population is the registered foreign contractors who are involved in the construction projects in Tanzania. It may as well lay down the number of items to be included in the sample, i.e. the sample size.

This involves selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group (Kothari, 2004). The sample design should be selected in such a way that is reliable and appropriate to the study.

The study design chosen is of cross sectional study design which has the following characteristics;

- Used to describe status studies
- Used to find out the prevalence of a phenomenon, situation, attitude, etc.
- Useful to obtain an overall “picture” at a particular time of study.
- Simple in design:
 - decide what you want to find out
 - identify population & select the sample
 - contact respondents to find answers

The sampling method used in this study was non-random sampling. The non-random sampling of snowball type is chosen because of the following reasons;

- i. A sample is selected using networks.
- ii. To start with, a few individuals are selected & the required information is collected from them.
- iii. They are then asked to identify other people in the group.
- iv. Information is selected from them and also asked to identify other members.
- v. In turn those identified become basis of further data collection.
- vi. The process is repeated until the required saturation point is reached

3.5.1 The survey sample

The population of this research is composed of three groups, Clients, Consultants, and Foreign Contractors working on large construction projects in Tanzania.

The size of the sample required from each population was determined on the basis statistical principle for this type of exploratory research.

The sample size was calculate as follows (Al- Dubasis, 2000)

$$n = n_0 / [1 + (n_0/N)] \dots\dots\dots(1)$$

$$n_0 = (p*q) / v^2 \dots\dots\dots (2)$$

Where

n: Sample size

n₀: First estimate of sample size

N: Population size 46

p: The proportion of the characteristic being measured in the target population

q: Complement of ‘p’ or 1- p

v: Maximum percentage of standard

The confidence level is 95%, the confidence level score would equal 1.96. Distribution, on the other hand, reflects how skewed the respondents are on a topic. In the survey world it is almost always safest to stick with a 50% distribution, which is the most conservative.

We have a population of 46 registered foreign contractors, and a desired confidence level of 95% and margin of error of 5%:

For the purpose of getting maximize sample size (n), the value of (p) was set at 0.5 and subsequently does (q).

The target population N is 46 substituting all these values in Equation 1 and 2 above;

$$n_0 = (p * q) / v^2 = 0.5 * 0.5 / (0.05 / 1.96)^2 = 384.16$$

$$n = n_0 / [1 + (n_0 / N)] = 384.16 / [1 + (384.16 / 46)] = 41.08 = 41$$

Percentage of calculated sample size = $(41/46) * 100 = 89.13 \%$

The percentage of the calculated sample size is 89.13%.

Furthermore, the perceptions of the clients employed foreign contractors and the consultants supervising the building construction works undertaken by the foreign building contractors were also been collected with their sample size of 10 consultants and 10 clients.

3.5.2 Selection of Respondents

The selection of targeted respondents was restricted to the clients, the consultants and the foreign contractors who are involved in the large construction projects in Tanzania. Furthermore, the Consultants and Clients were selected from the Contractors Registration Board (CRB) list of registered construction projects in Tanzania for year 2013 – 2015. The sample size for Consultants and Clients is chosen to be 10 each because of the following reasons;

- They are undertaking multi-storey building construction works with foreign contractors,
- Undertaking more than one building construction project,
- The construction projects are being undertaken in Dar es Salaam

The selected foreign building contractors, clients and consultants possess the following characteristics;

- They are listed in the CRB list of registered construction projects in Tanzania for year 2013 – 2015
- They are undertaking multi-storey building construction works in Dar es Salaam,
- Undertaking more than one building construction project,

Therefore, in this survey a total of 61 Questionnaires will be distributed 10, 10, and 41 to the clients, consultants, and foreign contractors respectively.

3.5.3 Questionnaire Distribution

In this study, due to time limitation and for the required speed of response, the survey questionnaires will be delivered and collected personally by the researcher from the targeted respondents. This method was effective to ensure that the questionnaire form will be received by the target person and it was much easier to collect. Also it allowed the direct communication between the researcher and the respondents and has the added benefits of enabling clarifications to respondents about questions in the questionnaires.

3.5.4 Data collection

In spite of the fact that “collecting data is becoming progressively more difficult” (Fellows and Liu, 2003 p.149) data collection is a very important aspect of any research process, and is considered the most critical part of the study as any errors , results and conclusions. However, the accuracy of the data collected is fundamental in achieving the main objectives of the study and will determine the degree of success or the failure of the research, In general, the approach to data collection is based on the type of data to be collected, the nature of the investigation and the information that is required and available.

Questionnaire surveys are considered one of the most effective ways of collecting data and information about the phenomena of interest, because it involves a large number of people in the process in order to achieve better results, Therefore based on a comprehensive literature review and following (Fellows and Liu, 2003) recommendations for most of researches in social science and management spheres the data collection method for this study was a questionnaire survey.

Data obtained through questionnaire was analyzed accordingly using appropriate analysis techniques. The results will be presented and discussed in Chapter 4 following by some proposed measures, and conclusions and recommendations in chapter 5 and 6 respectively. Recommendations for enhancing core competence for local contractors in large construction projects in Tanzania are emphasized in views of the results of the research.

3.5.5 Data Analysis

The procedure used in analyzing of the collection data aimed at establishing the relative importance index (RII) of the areas of core competence that contribute to competitive advantage, and measures for enhancing core competence for building contractors as perceived by the three group of respondents which were the clients, consultants, and foreign contractors.

There are two steps used in analyzing the data; calculating the relative importance index; and ranking of factor in each category based on relative importance index. For this purpose Microsoft Excel is chosen as the best options available.

All the possible areas of core competence that could contribute to competitive advantage were listed and ranked according to the rating scale given by the respondents. To determine the ranking of different areas of core competence from the viewpoint of the clients, consultants, and foreign contractors, the RII will be calculated using the formula proposed by Sambasivan and Soon (2007) as follows;

$$RII = \frac{\sum W}{A * N} \quad (0 \leq RII \leq 1)$$

Where;

W = the weight given to each factor by the respondents (ranging from 1 to 4) as 1 means highly insignificant, 2 means insignificant, 3 means significant, and 4 means highly significant.

A = is the highest weight (i.e. 4 in this case)

N = is the total number of respondents)

According to Gary D. Holt, (2014) alternative RII models can produce similar results of analysis; “simple percentage”; the minimum rating scale integer should accurately reflect its descriptor;

Therefore, the relative importance index (RII) ranging from 0 to 1 can be expressed into percentages (%) into four categories based on weight ranging 1 to 4 and carry the following meanings;

- i. 0 – 25% means highly insignificant,
- ii. 25 – 50% means insignificant,
- iii. 50 – 75% means significant, and
- iv. 75 – 100% means highly significant.

3.6 Summary

In this chapter, the research methodology and questionnaire design was described. The data collection for this study was obtained from literature review and questionnaire survey. The data collected was analyzed by using Microsoft Excel to determine the relative importance index and rank areas of core competence, effects and enhancement measures. In the next chapter the data analysis and results will be presented.

CHAPTER FOUR

4.0 DATA INTERPRETATION AND DISCUSSION OF FINDINGS

4.1: Introduction

In this chapter, the data obtained through the survey questionnaires is analysed and discussed. The objective of performing this data analysis is to identify and rank the areas of core competences of foreign building contractors in creation of competitive advantage and to propose ways of how the core competence of foreign building contractors can be used as a learning experience to local building contractors in the construction industry of Tanzania.

4.2: Data Collection and Analysis

In order to analyse and discuss the results of the data collected in a systematic way, it was decided to present the analysis in three categories in the same order used in the survey questionnaire forms.

The first section analyses the data relating to the respondents personal experiences and their companies profiles.

The second section focuses on the specific objectives of this study by selecting and ranking the areas of core competence that creates competitive advantage for foreign contractors in the construction industry of Tanzania based on the relative importance index (RII). The RII is

computed by the formula adopted by Sambasivan and Soon (2007) as indicated in the previous Chapter. The researcher used Microsoft Excel in order to generate the results.

In an open end question based on respondents experiences were asked to propose ways of how the core competence of foreign building contractors can be used as a learning experience to local building contractors in the construction industry of Tanzania. In this section the proposed ways from respondents were incorporated.

Before proceeding with analysis and discussion, it should be noted that no other areas of core competence for foreign contractors other than those listed in the questionnaires were indicated by the respondents. This indicates that the list developed by the researcher was comprehensive.

4.3: General Questionnaire Responses

The questionnaires survey was conducted in early March 2016 and 61 sets of questionnaires were distributed mainly to foreign Contractors, however Clients (project developers), and Consultants supervising the building works executed by foreign contractors were also being involved to gather their perceptions regarding the core competence of foreign building contractors. Due to the time limitation, survey questionnaires were delivered and collected personally by the researcher. All the selected respondents are involved in building construction projects in Tanzania. The total numbers of respondents that completed and returned the questionnaires were 33 which is equivalent to 53.22% of the total distributed questionnaires to the selected sample size. The individual group of respondent's feedback comprised of 21 foreign contractors which accounted

for 21 out of 41 (51.2%), 6 Consultants and 6 Clients which accounted for 6 out of 10 (60%) of the respondents as shown in Table 4.1.

Generally, the overall respondent's feedback out of total 33 comprised of 21 foreign contractors which accounted for 33.87% of the respondents, 6 Consultants and 6 Clients which accounted for 9.67% of the respondents

Table 4.1: Summary of General Questionnaires Distributed and Responses

Description	No. Sample Size	No. of Respondents	% of No. of Responses out of total
Foreign Contractors	41	21 (51.2%)	33.87
Clients	10	6 (60%)	9.67
Consultants	10	6 (60%)	9.67
Total	61	33	53.22

(Source: Questionnaires survey, 2016)

4.4: Respondents and Company Profile

This section presents and discusses the general information and data concerning the respondents company experiences, type of organization, number of registered experts present in the company, and size of projects performed.

The purpose of this section is to indicate their experiences, and the degree of reliability of the data and information provided by them.

4.4.1: Type of Organization

Respondents were asked to indicate the type of organization that they work for in the construction industry. The total number of respondents was 33 (53.22%) of the targeted respondents.

Table 4.2 show the respondents type of organization. The main and targeted respondents were foreign contractors. Foreign contractors had 21 respondents out of 41 participants that give the highest percentage of 64%. Consultants and Clients came in the second position, each with 6 out of 10 participants which accounted to 18%.

Table 4.2: Summary of Type of Organization

Type of Business	No. of Respondents	Percentages (%)
Foreign Contractors	21	64
Clients	6	18
Consultants	6	18
Total	33	100

(Source: Questionnaires survey, 2016)

4.4.2: Professional Registered Experts

Respondents were asked to indicate the number and type of professional registered experts that they work for their organizations in the construction industry. The listed types of professionals were Engineers, Quantity Surveyors, and Architects whom are mostly involved in building construction works.

Table 4.3 show the respondents type of registered professionals in their organizations. According to the analysed questionnaires from foreign building contractors, clients, and consultants shows that, in the participants of foreign building contractors there are more registered engineers accounted for 18 out of 33 (54.54%), followed by registered quantity surveyors with 14 out of 33 (42.42%) and 1 out of 33 (3.03%) of others which were registered accountants; while for consultants participated there are more registered engineers accounted for 4 out of 12 (33.33%) followed by registered architects accounted for 4 out of 12 (33.33%), registered quantity surveyors accounted for 3 out of 12 (25%), and 1 out of 12 (8.33%) of others which were registered accountants; furthermore, in the client group there are more registered Engineers participating in the construction works which accounted for 5 out of 10 (50%), followed by registered quantity surveyors accounted for 4 out of 10 (40%) and 1 out of 10 (10%) of others which were registered procurement experts of which all of them are from government institutions.

Generally, the overall analysis of foreign building contractors, clients, and consultants showed that there are more registered engineers participating in execution of building works which accounted to 49.09%, followed by registered quantity surveyors which accounted to 38.18%, and

then by registered architects which accounted for 7.27%, lastly by others accounted for 5.45% of which comprised of registered accountants and procurement experts. These results portray that most of building works are executed by Engineers and Quantity Surveyors while most of supervision works are executed by Architects.

Table 4.3: Summary of Type of Professional Registered Experts

Registered Professionals	Foreign Contractors	Clients	Consultants	Total	Overall Percentage (%)
Engineers	18 (54.54%)	5 (50%)	4 (33.33%)	27	49.09
Quantity Surveyors	14 (42.42%)	4 (40%)	3 (25%)	21	38.18
Architects	0 (0%)	0 (0%)	4 (33.33%)	4	7.27
Others	1 (3.03%)	1 (10%)	1 (8.33%)	3	5.45
Total	33 (100%)	10 (100%)	12 (100%)	55	100

(Source: Questionnaires survey, 2016)

4.4.3: Organization Experiences in Construction Industry

Duration of services in the organization/company was classified into three categories of Foreign Contractors Consultants, and Clients as shown in Table. According to the analysed questionnaires from foreign building contractors, clients, and consultants shows that, foreign building contractors portrays that the dominant years of experience with construction works are for experience between years 6 – 15 years which was accounted for 12 out of 21 (57.14%) followed

by contractors with experience of more than 15 years which accounted for 9 out of 21 (42.86%) and there were no group of contractors with experiences of less than 5 years; while clients with construction experience for more than 15 years were accounted for 4 out of 6 (66.66%) followed by clients with experience of years between 6 – 15 years which were accounted for 1 out of 6 (16.7%) and lastly clients with experiences of less than 5 years which were accounted for 1 out of 6 (16.7%); lastly the group of consultants shows that the dominant years of experience with construction works are for experiences with more than 15 years which accounted for 3 out of 6 (50%), followed by consultants with experiences between years 6 – 15 years which accounted for 2 out of 6 (33.33%), and then by consultants with experiences of less than 5 years which accounted for 1 out of 6 (16.67%).

Generally, the overall analysis of foreign contractors, clients, and consultants showed that organizations/companies that participated in this survey out of 33, 16 out of 33 (49%) of respondents had experiences for building works with more than 15 years, while 15 out of 33 (45%) accounted for respondents with experiences for building works with experiences for 6 to 15 years, and lastly 2 out of 33 (6%) accounted for respondents with experiences for building works with less than 5 years of experiences.

Therefore, the majority of the respondents have experiences between 6 to 15 years and more than 15 years of experience in building construction works, this indicates that these organizations are well established and have been involved in the construction industry for quite a time. Fortunately, this reflects that the quality and reliability of data collected from organizations having adequate years of experiences in construction industry. It also indicates that most of the organizations have very broad background about construction projects and sharing their knowledge leads to ranking

of areas of core competence for foreign contractors in creation of competitive advantage in the construction industry of Tanzania.

Table 4.4: Summary of Organization/Company Experiences in Construction Industry

Organization/company experiences	Foreign Contractors	Clients	Consultants	Total	Percentage (%)
Less than 5 years	0 (0%)	1 (16.67%)	1 (16.67%)	2	6
5 - 15 years	12 (57.14%)	1 (16.67%)	2 (33.33%)	15	45
Greater than 15 years	9 (42.86%)	4 (66.66%)	3 (50%)	16	49
Total	21 (100%)	6 (100%)	6 (100%)	33	100

(Source: Questionnaires survey, 2016)

4.4.4: Project Size in Construction Industry

Respondents were asked to determine the size of the construction projects in terms of value that they were participated in. Table 4.5 illustrates the main categories of the project size. According to the analysed questionnaires from foreign building contractors, clients, and consultants portrays that, the group of foreign contractors that dominated has executed large project size with value between \$10 Million and \$100 Million which accounted for 12 out of 21 (57.14%), followed by contractors that executed medium project size with value between \$1 Million and \$10 Million which accounted for 5 out of 21 (23.80%), then followed by contractors executed very large project size with value of more than \$100 Million which accounted for 4 out of 21 (19.04%), and

lastly there was no contractors involved in execution of projects of small project size with value less than \$1 Million.

while, the client group that executed very large project size with value of more than \$100 Million has dominated which accounted for 3 out of 6 (50%), followed by clients that executed large project size with value between \$10 Million and \$100 Million which accounted for 2 out of 6 (33.33%), then followed by clients that executed medium project size with value between \$1 Million and \$10 Million which accounted for 1 out of 6 (16.67%), and lastly there was no client involved in execution of projects of small project size with value less than \$1 Million.

Moreover, the consultants group that dominated has executed medium project size with value between \$1 Million and \$10 Million which accounted for 3 out of 6 (50%), followed by consultants that executed large project size with value between \$10 Million and \$100 Million which accounted for 2 out of 6 (33.33%), then followed by consultants executed very large project size with value of more than \$100 Million which accounted for 1 out of 6 (16.67%), and lastly there was no contractors involved in execution of projects of small project size with value less than \$1 Million.

Generally, the overall analysis of foreign building contractors, clients, and consultants showed that organization/companies that participated in this survey out of 33 of organizations, the dominant 49% of organizations deal with large size projects ($\$10 \text{ Million} \leq$ and $\geq \$100 \text{ Million}$), followed by organizations dealing with medium size projects 27% ($\$1 \text{ Million} \leq$ and $\geq \$10 \text{ Million}$). Whereas, 24% ($\geq \100 Million) were organizations dealing with very large size projects and none of the organizations were dealing with small size projects.

This data shows that most of the organizations were dealing with the project size with value of more than US\$ 1 Million of which complies with the requirement of CRB for contractors with class I to undertake projects with unlimited values.

Table 4.5: Summary of Project Size

Project Size	Foreign Contractors	Clients	Consultants	Total	(%)
Very large (\geq \$100 Million)	4 (19.04%)	3 (50%)	1 (16.67%)	8	24
Large (\$10 Million \leq and \geq \$100 Million)	12 (57.14%)	2 (33.33%)	2 (33.33%)	16	49
Medium (\$1 Million \leq and \geq \$10 Million)	5 (23.80%)	1 (16.67%)	3 (50%)	9	27
Small \leq \$1 Million	0 (0%)	0 (0%)	0 (0%)	0	0
Total	21	6	6	33	100

(Source: Questionnaires survey, 2016)

4.5: Factors for Areas of Core Competences

The data collected from the second part of the questionnaires was analysed using the relative importance index (RII). Each factor's RII, as perceived mainly by foreign building contractors were calculated. Furthermore, Clients and Consultants supervised the building works undertaken by the foreign building contractors were also involved in the survey to gather their perceptions as

well to identify the, most important factors that contribute to areas of core competence for overall analysis.

These factors were ranked based on the RIIs value. From the ranking assigned to each factor, the researcher was able to identify the most significant factors on areas of core competence of foreign building contractors in the creation of competitive advantage in the construction industry of Tanzania. The following sections are describing the factors in each group.

4.5.1: Relationship Resource Factors

These factors explored from the respondents how “relationship” as a resource factor was applied in enhancing the respondent’s competence. Foreign contractors were to rank the significance they put in relationship with: clients, regulatory bodies, financial institutions, subcontractors, suppliers, and consultants. Furthermore, clients and consultants who supervised the construction works undertaken by foreign contractors had likewise to do the same. An overall mean was eventually established. The result of the data analysis obtained from questionnaire and the ranking of the six (6) relationship resource factors based on the RII’s value, are as shown in Table 4.6.

Table 4.6: The RII and the ranking of the relationship resources factors

No.	Factors	Foreign Contractors		Consultants		Clients		Overall	
		RII	Rank	RII	Rank	RII	Rank	Mean	Rank
1	Clients	0.845	2	0.9166	1	0.9166	2	0.8927	1
2	Regulatory Bodies	0.6666	6	0.5416	6	0.708	6	0.6387	6
3	Financial Institutions	0.75	4	0.7083	4	0.75	4	0.7361	4
4	Sub-Contractors	0.738	5	0.625	5	0.708	5	0.6903	5
5	Suppliers	0.809	3	0.7916	2	0.833	3	0.8112	3
6	Consultants	0.9047	1	0.7083	3	0.9166	1	0.8432	2

(Source: Questionnaires survey, 2016)

According to the analysed questionnaires on Table 4.6 illustrate respondents from foreign building contractors, clients, and consultants. The foreign building contractors ranked first the relationship between contractors and consultants with a RII of 0.9047, the second ranked was the relationship between contractors and clients with RII of 0.845, and the third rank was the relationship between the contractors and the suppliers with RII of 0.809; While consultants ranked first the relationship between contractors and clients with RII of 0.9166, and the second ranked was relationship between contractors and suppliers with RII of 0.7916, and the third ranked was the relationship between contractors and consultants with RII of 0.7083; lastly the clients ranked first the relationship between contractors and clients with RII of 0.9166, secondly

ranked relationship between contractors and clients with RII of 0.9166, and third ranked relationship between contractors and suppliers with RII of 0.833.

Generally, the overall analysis based on the ranking of the RII shows that, the highly significant relationship resource factors that contribute to competitive advantage as perceived by Clients, Consultants and Contractors are;

- Relationship between contractors and Clients with RII ranging from 0.845 to 0.9166 with a mean of 0.8927 (89.27%)
- Relationship between contractors and Consultants with RII ranging from 0.7083 to 0.9166 with a mean of 0.8432 (84.32%)
- Relationship between contractors and Suppliers with RII ranging from 0.7916 to 0.833 with a mean of 0.8112 (81.12%)

This implies that among the six relationship resource factors the above three ranked factors were the most contributing factors for successfully acquisition of construction works in Tanzania.

4.5.2: Equipment and Machinery Factors

These factors explored from the respondents how “equipment and machinery” as a resource factor was applied in enhancing the respondent’s competence. Foreign contractors were to rank the significance they put in equipment and machinery in terms of: allocation of sufficient funds for equipment & machinery, employees are provided with training and incentive mechanisms, use of technical database and IT systems, use of skilled labours. Furthermore, clients and

consultants who supervised the construction works undertaken by foreign contractors had likewise to do the same. An overall mean was eventually established. The result of the data analysis obtained from questionnaires survey and the ranking of the four (4) equipment and machinery factors based on the RII's value, are as shown in Table 4.7.

Table 4.7: The RII and the ranking of the equipment and machinery factors

No.	Factors	Foreign Contractors		Consultants		Clients		Overall	
		RII	Rank	RII	Rank	RII	Rank	Mean	Rank
1	Allocation of sufficient funds for equipment & machinery	0.8809	1	0.875	1	0.9166	1	0.8908	1
2	Employees are provided with training and incentive mechanisms	0.619	3	0.75	2	0.625	4	0.6646	3
3	Use of technical database and IT systems	0.559	4	0.666	4	0.75	3	0.6583	4
4	Skilled labours	0.8214	2	0.666	3	0.666	2	0.7178	2

(Source: Questionnaires survey, 2016)

According to the analysed questionnaires on Table 4.7 illustrate respondents from foreign building contractors, clients, and consultants portrays that, the foreign building contractors ranked first the allocation of sufficient funds for equipment & machinery with RII of 0.8809, the second ranked was the use of skilled labours with RII of 0.8214, and the third rank was

employees are provided with training and incentive mechanisms with RII of 0.619; While consultants ranked first the allocation of sufficient funds for equipment & machinery with RII of 0.875, and the second ranked was employees are provided with training and incentive mechanisms with RII of 0.75, and the third ranked was the use of skilled labours with RII of 0.666; lastly the clients ranked first the allocation of sufficient funds for equipment & machinery with RII of 0.9166, secondly ranked was the use of skilled labours with RII of 0.666, and third ranked was the use of technical database and IT systems with RII of 0.75.

Generally, the overall analysis based on the ranking of the RII shows that, the highly significant equipment and machinery factor that contribute to competitive advantage as perceived by Clients, Consultants and Contractors is;

- Allocation of sufficient funds for equipment & machinery with RII ranging from 0.875 to 0.9166 with a mean of 0.8908 (89.08%)

This implies that among the four equipment and machinery factors, only allocation of sufficient funds for equipment & machinery was the most contributing factors for successfully acquisition of construction works in Tanzania.

4.5.3: Financial Capabilities Factors

These factors explored from the respondents how “financial capabilities” as a resource factor was applied in enhancing the respondent’s competence. Foreign contractors were to rank the significance they put in financial capabilities in terms of: adequate accessibility to financial

institutions, good cash flows, adequate of bid securities, good credit facilities, and high construction material inventory/stock. Furthermore, clients and consultants who supervised the construction works undertaken by foreign contractors had likewise to do the same. An overall mean was eventually established. The result of the data analysis obtained from questionnaires survey and the ranking of the five (5) financial capabilities factors based on the RII's value, are as shown in Table 4.8.

Table 4.8: The RII and the ranking of the financial capabilities factors

No.	Factors	Foreign Contractors		Consultants		Clients		Overall	
		RII	Rank	RII	Rank	RII	Rank	Mean	Rank
1	Adequate accessibility to financial institutions	0.845	3	0.833	2	0.875	2	0.851	2
2	Good cash flows	0.9285	1	0.9166	1	0.9166	1	0.9205	1
3	Adequate of bid securities	0.7261	5	0.5416	5	0.833	4	0.7002	5
4	Good credit facilities	0.8095	4	0.7084	4	0.875	3	0.7976	4
5	High construction material inventory/stock	0.869	2	0.75	3	0.791	5	0.8033	3

(Source: Questionnaires survey, 2016)

According to the analysed questionnaires on Table 4.8 illustrates respondents from foreign building contractors, clients, and consultants portrays that, the foreign building contractors ranked first good cash flows with RII of 0.9285, the second ranked was high construction material inventory/stock with RII of 0.869, and the third rank was adequate accessibility to financial institutions with RII of 0.845; While consultants ranked first good cash flows with RII of 0.9166, the second ranked was adequate accessibility to financial institutions with RII of 0.833, and the third ranked was high construction material inventory/stock with RII of 0.75; lastly the clients ranked first good cash flows with RII of 0.9166, secondly ranked was adequate accessibility to financial institutions with RII of 0.875, and third ranked was good credit facilities with RII of 0.875.

Generally, the overall analysis based on the ranking of the RII shows that, the highly significant financial capability factors that contribute to competitive advantage as perceived by both Clients, Consultants and Contractors are;

- Good cash flows with RII ranging from 0.9166 to 0.9285 with a mean of 0.9205 (92.05%)
- Adequate accessibility to financial institutions with RII ranging from 0.833 to 0.875 with a mean of 0.851 (85.1%)
- High construction material inventory/stock with RII ranging from 0.75 to 0.869 with a mean of 0.8033 (80.33%)
- Good credit facilities with RII ranging from 0.7084 to 0.875 with a mean of 0.7679 (76.79%)

This implies that among the five financial capabilities factors, the above four ranked factors were the most contributing factors for successfully acquisition of construction works in Tanzania.

4.5.4: Project Management Competency Factors

These factors explored from the respondents how “project management competency” as a resource factor was applied in enhancing the respondent’s competence. Foreign contractors were to rank the significance they put in project management competency in terms of: schedule management, cost management, quality management, contract management, procurement management. Furthermore, clients and consultants who supervised the construction works undertaken by foreign contractors had likewise to do the same. An overall mean was eventually established. The result of the data analysis obtained from questionnaires survey and the ranking of the five (5) project management competencies factors based on the RII’s value, are as shown in Table 4.9.

Table 4.9: The RII and the ranking of the project management competencies factors

No.	Factors	Foreign Contractors		Consultants		Clients		Overall	
		RII	Rank	RII	Rank	RII	Rank	Mean	Rank
1	Schedule Management	0.7857	5	0.791	2	0.958	1	0.8449	2
2	Cost Management	0.869	1	0.75	3	0.875	4	0.8313	3
3	Quality Management	0.8214	4	0.708	4	0.958	2	0.8291	4
4	Contract Management	0.8214	3	0.833	1	0.9166	3	0.857	1
5	Procurement Management	0.8333	2	0.708	5	0.875	5	0.8054	5

(Source: Questionnaires survey, 2016)

According to the analysed questionnaires on Table 4.9 illustrates respondents from foreign contractors, clients and consultants portrays that, the foreign building contractors ranked first cost management with RII of 0.869, the second ranked was procurement management with RII of 0.8333, and the third rank was contract management with RII of 0.8214; While consultants ranked first contract management with RII of 0.833, and the second ranked was schedule management with RII of 0.791, and the third ranked was cost management with RII of 0.75; lastly the clients ranked first schedule management with RII of 0.958, secondly ranked was

quality management with RII of 0.958, and third ranked was contract management with RII of 0.9166.

Generally, the overall analysis based on the ranking of the RII shows that, the highly significant project management competence factors that contribute to competitive advantage as perceived by both Clients, Consultants and Contractors are;

- Contract Management with RII ranging from 0.8214 to 0.9166 with a mean of 0.857 (85.7%)
- Schedule Management with RII ranging from 0.7857 to 0.958 with a mean of 0.8449 (84.49%)
- Cost Management with RII ranging from 0.75 to 0.875 with a mean of 0.8313 (83.13%)
- Quality Management with RII ranging from 0.708 to 0.958 with a mean of 0.8291 (82.91%)
- Procurement Management with RII ranging from 0.708 to 0.875 with a mean of 0.8054 (80.54%)

This implies that, all the five factors of project management competency factors were the most contributing factors for successfully acquisition of construction works in Tanzania.

4.5.5: Reputation Factors

These factors explored from the respondents how “reputation” as a resource factor was applied in enhancing the respondent’s competence. Foreign contractors were to rank the significance they

put in reputation in terms of: positive manner in resolving problems, good past experiences, satisfying customer demands, good relationship with suppliers, and timely completion of jobs in satisfying manner. Furthermore, clients and consultants who supervised the construction works undertaken by foreign contractors had likewise to do the same. An overall mean was eventually established. The result of the data analysis obtained from questionnaires survey and the ranking of the five (5) reputation factors based on the RII's value, are as shown in Table 4.10.

Table 4.10: The RII and the ranking of the reputation factors

No.	Factors	Foreign Contractors		Consultants		Clients		Overall	
		RII	Rank	RII	Rank	RII	Rank	Mean	Rank
1	Positive manner in resolving problems	0.8214	1	0.833	3	0.958	1	0.8708	1
2	Good past experiences	0.7619	4	0.873	4	0.798	4	0.8109	3
3	Satisfying customer demands	0.8214	2	0.7085	5	0.75	3	0.7599	5
4	Good relationship with suppliers	0.75	5	0.875	2	0.708	5	0.7776	4
5	Timely completion of jobs in satisfying manner	0.7857	3	0.875	1	0.875	2	0.8452	2

(Source: Questionnaires survey, 2016)

According to the analysed questionnaires on Table 4.10 illustrates respondents from foreign building contractors, clients and consultants portrays that, the foreign building contractors ranked first positive manner in resolving problems with RII of 0.8214, the second ranked was satisfying customer demands with RII of 0.8214, and the third rank was timely completion of jobs in

satisfying manner with RII of 0.7857; While consultants ranked first timely completion of jobs in satisfying manner with RII of 0.875, and the second ranked was good relationship with suppliers with RII of 0.875, and the third ranked was satisfying customer demands with RII of 0.75; lastly the clients ranked first positive manner in resolving problems with RII of 0.958, secondly ranked was timely completion of jobs in satisfying manner with RII of 0.875, and third ranked was satisfying customer demands with RII of 0.75.

Generally, the overall analysis based on the ranking of the RII shows that, the highly significant reputation factors that contribute to competitive advantage as perceived by Clients, Consultants and Contractors are;

- Positive manner in resolving problems with RII ranging from 0.8214 to 0.958 with a mean of 0.8708 (87.08%)
- Timely completion of jobs in satisfying manner with RII ranging from 0.7857 to 0.875 with a mean of 0.8452 (84.52%)
- Good past experiences with RII ranging from 0.7619 to 0.873 with a mean of 0.8109 (81.09%)
- Good relationship with suppliers with RII ranging from 0.708 to 0.875 with a mean of 0.7776 (77.76%)
- Satisfying customer demands with RII ranging from 0.7085 to 0.8214 with a mean of 0.7599 (75.99%)

This implies that, all the five factors of reputation factors were the most contributing factors for successfully acquisition of construction works in Tanzania.

4.6: Ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors

Based on the reasons towards alternating imbalances in value of construction project executed an open ended question of the questionnaires (Part C) was introduced. Based on respondent's experiences on execution building works in Tanzania, foreign building contractors, consultants and clients were asked to provide their suggestions on how the core competence of foreign building contractors can be used as a learning experience to local building contractors in creation of competitive advantage in the construction industry of Tanzania. This section provides the suggested ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors as follows:

- Government should establish financial institutions such as banks that will provide loans to local contractors with affordable interest rates. This will promote local contractors in execution of building works effectively.
- Local contractors should budget their income to purchase up to date equipment and machines so that can be utilised at less costs as compared when hired from other companies.
- Local contractors should specialize on their areas of core competence; this will enable them to execute high valued projects with required quality for instance specialized in construction of single or double storey buildings.
- Local contractors should joint venture with foreign contractors to adopt the way of executing works of which this will improve their areas of weakness.

- The construction policy in terms of joint venture should be enriched into regulation so that every foreign contractors should not be allowed to execute works without involving local contractors in Tanzania
- Local contractors should periodically provide training and development to their skilled workers for training so that they can be aware with the changes of technology used in construction industry worldwide.

Apart from the above mentioned related core competence factors, there were also other factors suggested by respondents as used by foreign building contractors of which if adopted by local building contractors may enhance their core competence in execution of building works;

- All local construction crew should be based on site; this is used by the foreign contractors of which helped them to commence the construction works all together effectively of which saves time and they can work day and night with shifts.
- The use tool box meetings should be emphasized; early in the morning before construction works should conduct meetings for the need of discussing the workers daily obligations and their targets and immediately after construction works meetings should be done to evaluate the quality of work done, how far does the targets meet, and what challenges faced and plan the solutions for the challenges.

4.7: Summary

The data obtained from the questionnaires survey regarding areas of core competence that foreign contractors have in creation of competitive advantage in the construction industry of Tanzania

were analysed and ranked based on the RII. The following is the summary of the data analysis results and discussion.

- The total numbers of respondents that completed and returned the questionnaires were 33 which is equivalent to 53.22% of the total distributed questionnaires (selected sample size). The respondent's feedback comprises of 21 foreign contractors which accounted for 33.87% of the respondents, 6 Consultants and 6 Clients which accounted for 9.67% of the respondents.
- Out of 33 Organizations/Companies that participated in this survey shows that the highest level of respondents 49% of organizations deal with large size projects ($\$10 \text{ Million} \leq$ and $\geq \$100 \text{ Million}$), followed by organizations dealing with medium size projects 27% ($\$1 \text{ Million} \leq$ and $\geq \$10 \text{ Million}$). Whereas, 24% ($\geq \100 Million) were organizations dealing with very large size projects and none of the organizations were dealing with small size projects.
- The analysis based on the ranking of the RII, the highly significant relationship resource factors that contributes to core competence as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Relationship between contractors and clients
 - Relationship between contractors and consultants
 - Relationship between contractors and suppliers

- The analysis based on the ranking of the RII, the highly significant equipment and machinery factor contributing to core competence as perceived by Foreign Building Contractors, Consultants and Clients is;
 - Allocation of sufficient funds for equipment & machinery

- The analysis based on the ranking of the RII, the highly significant financial capability factors as perceived by Foreign Building Contractors, Clients, and Consultants are;
 - Good cash flows
 - Adequate accessibility to financial institutions
 - High construction material inventory/stock
 - Good credit facilities

- The analysis based on the ranking of the RII, the highly significant project management competencies factors contributing to core competence as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Contract management
 - Schedule management
 - Quality management
 - Quality management, and
 - Procurement management

- Lastly, the analysis based on the ranking of the RII, the highly significant reputation factors contributing to core competence as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Timely completion of jobs in satisfying manner
 - Positive manner in resolving problems
 - Good past experiences
 - Good relationship with suppliers, and
 - Satisfying customer demands

CHAPTER FIVE

5.0: CONCLUSION AND RECOMMENDATION

5.1: Introduction

The main objective of this research was to evaluate the core competence of foreign building contractors as a means of creating competitive advantage and to propose ways on how their core competence can be used as a learning experience to local building contractors in the construction industry of Tanzania.

The four specific objectives of the research were as described below;

- To assess the guanxi (relationship) and reputation resources as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.
- To assess the project management competences as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.
- To assess the financial capabilities as a factor of core competence in creation of competitive advantage of foreign contractors in the construction industry of Tanzania.
- To propose the ways of how the core competence of foreign building contractors can be used as a learning experience to local building contractors in the construction industry of Tanzania.

For each specific objective was pursued by finding answers to these questions:

- i. How do the guanxi (relationship) and reputation resources contribute in creating competitive advantage of foreign building contractors in Tanzania.
- ii. How do the project management competences contribute in creating competitive advantage of foreign building contractors in Tanzania.
- iii. How do the financial capabilities contribute in creating competitive advantage of foreign building contractors in Tanzania.
- iv. How can the core competence of foreign building contractors be used as learning experiences to local building towards creating competitive advantage in bidding and project execution in the construction industry of Tanzania.

5.2: Conclusions

The conclusion of the study is based on the objectives as mentioned on section 1.3 and the scope and limitation of the study as outlined on section 1.6. All four specific objectives of the study have been achieved/ covered. The conclusions are as follows:-

- The first specific objective was to assess the relationship resource and reputation factors as a means of core competence in creation of competitive advantage to foreign building contractors.
 - For relationship resource factors, the overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant relationship resource factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Relationship between contractors and clients
 - Relationship between contractors and consultants
 - Relationship between contractors and suppliers

- For reputation resource factors, the overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant reputation resource factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Timely completion of jobs in satisfying manner
 - Positive manner in resolving problems
 - Good past experiences
 - Good relationship with suppliers, and
 - Satisfying customer demands

- The second specific objective was to assess the project management competence factors as a means of core competence in creation of competitive advantage to foreign building contractors. The overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant project management competence factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Contract management
 - Schedule management
 - Quality management
 - Quality management, and

- Procurement management

- The third specific objective was to assess the financial capability factors as a means of core competence in creation of competitive advantage to foreign building contractors. The overall analysis for all three respondents (foreign contractors, clients and consultants) based on the ranking of the RII shows that, the highly significant financial capability factors and the most contributing to core competence for successfully acquisition of construction works in Tanzania as perceived by Foreign Building Contractors, Consultants and Clients are;
 - Good cash flows
 - Adequate accessibility to financial institutions
 - High construction material inventory/stock
 - Good credit facilities

5.3: Recommendations

Based on respondent's experiences on execution of building works in Tanzania from foreign building contractors, consultants and clients the following are the recommendations on how the core competence of foreign building contractors can be used as a learning experience to local building contractors in order to improve their core competence in creation of competitive advantage in the construction industry of Tanzania

- Government should establish financial institutions such as banks that will provide loans to local contractors with affordable interest rates. This will promote local contractors in execution of building works effectively.
- Local contractors should budget their income to purchase up to date equipment and machines so that can be utilised at less costs as compared when hired from other companies.
- Local contractors should specialize on their areas of core competence; this will enable them to execute high valued projects with required quality for instance specialized in construction of single or double storey buildings.
- Local contractors should joint venture with foreign contractors to adopt the way of executing works of which this will improve their areas of weakness.
- The construction policy in terms of joint venture should be enriched into regulation so that every foreign contractors should not be allowed to execute works without involving local contractors in Tanzania
- Contractor's especially local contractors should periodically provide training and development to their skilled workers for training so that they can be aware with the changes of technology used in construction industry worldwide.

Apart from the above mentioned related core competence factors, there were also other factors suggested by respondents as used by foreign building contractors of which if adopted by local building contractors may enhance their core competence in execution of building works;

- All local construction crew should be based on site; this is used by the foreign contractors of which helped them to commence the construction works all together effectively of which saves time and they can work day and night with shifts.
- The use tool box meetings should be emphasized; early in the morning before construction works should conduct meetings for the need of discussing the workers daily obligations and their targets and immediately after construction works meetings should be done to evaluate the quality of work done, how far does the targets meet, and what challenges faced and plan the solutions for the challenges.

5.4: Further Research

The researcher therefore recommends further study regarding the core competence of foreign civil contractors as a means of creating competitive advantage and to propose ways on how their core competence can be used as learning experience to local civil contractors in the construction industry of Tanzania.

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APPENDICES

Appendix I: Survey Questionnaire Form

EVALUATION OF CORE COMPETENCE OF FOREIGN BUILDING CONTRACTORS IN CREATION OF COMPETITIVE ADVANTAGE IN THE CONSTRUCTION INDUSTRY OF TANZANIA

A part of the dissertation research for an M. Sc Degree in Construction Economics and Management at Ardhi University

- **Objectives of the study**

The objectives of this is to evaluate the core competence of foreign contractors in creation of competitive advantage in the construction industry of Tanzania in terms of Guanxi (relationship) resources, financial capabilities, project management competences, and reputation, and to propose measures for enhancing the core competence for contractors on undertaking large construction projects in construction industry of Tanzania.

This survey questionnaire form consists of three parts and are distributed to Foreign Contractors, Project Developers (Clients) and Consultants.

- Part A: Respondent's and company's Profile
- Part B: Areas of core competence for contractors

- Part D: Ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors

Please note:

- Your response is very important for the success of this study.
- All information provided will be treated in the strictest of confidence
- The company's name would not be displayed in this study
- The answer should be based on your experience in construction projects
- Kindly be frank in answering the questions as possible
- The findings and results of this will be used only for academic purposes

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Part – A Respondent’s and Company’s Profile

Please respond to the following questions either by ticking the appropriate box or by writing your answer in the space provided.

Company’s Name:

Your Professional:

Company’s Address:

.....

Email Address:

1. What is the nature of your organization’s / company’s business?

Client/Project Developer

Consultant

Contractor

Others, please

specify.....

2. How many registered experts do you have in your organization / company?

Engineers

Quantity Surveyors

Architects

Other, please specify

3. How long have you been working in the construction industry?

< 5 years

5 - 10 years ≥

] > 15 years

4. State the number of year your organization / company has experience in construction industry.

] < 5 years

] 5 - 15 years

] > 15 years

5. What is/are size of projects you have participated in?

(You may select more than one type)

] Very large (≤ \$ 100.0 Million)

] Large (≤ \$ 10.0 M < \$ 100 M)

] Medium (≤ \$ 1.0 M < \$ 10.0 M)

] Small (< \$ 1.0 M)

Part – B Areas of Core Competence

Objective of this part: To identify the major areas of core competence for contractors on large construction projects in Tanzania.

Question; when a construction project is completed on time, based on your experience to what extent the following related factors, below, contribute to success?

Please; rate, circle a figure as indicated below and write the answer in the space provided appropriate

Each scale represents the following rating:

(1) = Highly insignificant

(2) = Insignificant

(3) = Significant

(4) = Highly significant

No	Major Group / factors	RANK			
	Relationship Resources Factors				
1.	1. Clients	1	2	3	4
2.	2. Regulatory bodies	1	2	3	4
3.	3. Financial institutions	1	2	3	4
4.	4. Sub-contractors	1	2	3	4
5.	5. Suppliers	1	2	3	4
6.	6. Consultants	1	2	3	4
II	Equipment & Machinery Factors				
7.	1. Allocation of Sufficient funds for equipment & machinery	1	2	3	4
8.	2. Employees are provided with training and incentive mechanisms	1	2	3	4
9.	3. Use of technical database and IT systems	1	2	3	4
10.	4. Unskilled operators	1	2	3	4
III	Financial capabilities Factors				
11.	1. Adequate accessibility to financial resources	1	2	3	4
12.	2. Good cash flows	1	2	3	4
13.	3. Adequate of bid securities	1	2	3	4
14.	4. Good credit facilities	1	2	3	4
15.	5. High construction material inventory/stock	1	2	3	4

Project management competencies Factors						
16.	1.	Schedule management,	1	2	3	4
17.	2.	Cost management,	1	2	3	4
18.	3.	Quality management,	1	2	3	4
19.	4.	Contract management	1	2	3	4
20.	5.	Procurement management	1	2	3	4
IV	Reputation factors					
21.	1.	Positive manner in resolving problems	1	2	3	4
22.	2.	Good past performance	1	2	3	4
23.	3.	Satisfying customer demands	1	2	3	4
24.	4.	Good relationship with suppliers	1	2	3	4
25.	5.	Timely completion of jobs in a satisfying manner	1	2	3	4

2. Please write on other areas that you consider contribute to your core competence in the construction industry of Tanzania

1.
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2.
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3.
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4.
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5.
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Any other comments

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Part- C: Ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors

Objective of this Part: To propose ways on how the core competence of foreign building contractors can be used as a learning experience to local building contractors in order to improve their core competence in creation of competitive advantage in the construction industry of Tanzania

