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Makarfi, Aisha Shuaib

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The contributions of Foreign Construction Companies towards capacity building of Indigenous Construction Companies in the Nigerian Construction Industry

Submitted by:

Aisha Shuaib Makarfi

(794564)

A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in partial fulfilment of the requirements for a degree of MSc Project Management in Construction

Johannesburg 2017

DECLARATION

I hereby declare that this research report is entirely my own work, except where due references has been made. It is being submitted to the Degree of Master of Science to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other University.

Name Aisha Shuaib Makarfi

Signature _____

Date 30/11/2017

ABSTRACT

Premised on the problem of continued influx of major foreign construction companies into Nigeria, this study investigated how the foreign construction companies can work with the domestic construction companies to enable capacity building.

The three specific objectives of the research included: investigating the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria; investigating the level of importance of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria; and investigating the strategies for the foreign companies to work with the indigenous companies for capacity building.

Data were collected from construction professionals drawn predominantly from the northern part of Nigeria using mailed semi-structured questionnaires. 88 questionnaires were returned and analysed. The results provided insights into the challenges faced by the indigenous construction companies, contributions made by the foreign construction companies, and strategies for capacity building of the local construction companies and the industry as a whole.

The findings from this study explored possible strategies that could be implemented to enable the foreign and indigenous firms to work together to enhance the capacity of indigenous construction companies in Nigeria. The study also clarified the level of importance of different forms of contribution made by foreign construction companies to the capacity of indigenous construction companies.

Keywords: Capacity building, Strategy, Indigenous construction companies, Foreign construction companies, Nigeria.

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LIST OF ABBREVIATIONS

BMI	Business Monitor International
CAGR	Compound Annual Growth Rate
FOCI	Federation of Construction Industries
FRN	Federal Republic of Nigeria
GDP	Gross Domestic Product
ILO	International Labour Office
MDG	Millennium Development Goals
NBS	National Bureau of Statistics
NIOB	Nigerian Institute of Building
PPP	Public Private Partnership
R&D	Research and Development
SAP	Structural Adjustment Programme
UNCHS	United Nation Centre for Human Settlements
UNESCO	United Nations Educational, Scientific and Cultural Organisation
WBN	World Bank Nigeria

1 CHAPTER 1: INTRODUCTION

1.1 Overview

This chapter provides the background to this study. It discusses the research problem, aim and objectives of this study. It also discusses the research question, the importance of the research, and the structure of the report.

1.2 Background of Study

It has been established by Aniekwu and Audu (2010) that the yield of the Nigerian construction industry is considerably lower than that of their foreign counterparts resulting in a significant proportion of all building projects in Nigeria going to foreign contractors. The indigenous construction industry is slow to benefit from the substantial percentage of GNP in Nigeria to which the construction sector contributes, which is almost half of the total public spending (Adeyemi, 2000). High quality of construction is usually achieved through the use of expatriate and imported material and technology, however the value added to construction and the local industries supplying construction inputs is low (Aniekwu & Audu, 2010). It was also indicated by Aniekwu and Audu (2010) that the output of indigenous construction companies will always be lower compared to that of its foreign counterpart in the Nigerian construction industry. Thus, the essence of this present study is to understand the factors that hinder the capacity of the Nigerian construction industry and look at strategies that could be recommended for the indigenous and foreign companies to work together for capacity building.

1.2.1 The Emergence of Organised Construction in Nigeria

Organised construction contracting in Nigeria began in the 1940s with a few foreign companies starting operations (Isa et al., 2013). The independence of Nigeria in 1960 accompanied by the “oil boom” of the 1970s brought a rise in the construction activities. Up to the end of the Second Republic in the early 1980s (Isa et al., 2013), the Nigerian construction industry saw a tremendous rise in construction contracting, mainly by the expatriate companies, with only a handful of indigenous companies (Idoro, 2010). This period worsened the country’s deficiency in human resources and skills required to cater for projects conceived by the government.

1.2.2 Foreign Companies' Participation in the Nigerian Construction Industry

The presence of foreign companies in the Nigerian construction industry dates to the pre-independence period. Major construction activities were awarded to foreign companies whose technical and management skills were considered superior to that of indigenous companies, and who were considered as being more efficient in fund acquisition and the carrying out of projects (Ugochukwu, 2014). A study was conducted and revealed that one thousand, one hundred and thirty-three (1133) projects worth N11.25 billion were awarded by the Federal Government between 1974-1978, the period when construction activities was at its peak in Nigeria (Ugochukwu, 2014). Even though the indigenous companies got 77.2% of the 1133 projects, 93.05% of the value of the contracts was awarded to foreign companies. This is unsurprising because foreign companies and a few large indigenous companies dominate the construction industry in most developing countries (Larcher, 2000). Akintunde (2003) also noted that the foreign companies tend to expand in their areas of expertise more than their indigenous counterparts because foreign companies undertake more jobs. It is also concluded that a complex construction job is only an aggregate of many simple tasks and that experience can only be acquired by venturing and trying out, an opportunity that has not been granted to the indigenous contractors in Nigeria (Ugochukwu 2014).

To close the gap in opportunity, letting foreign companies get involved in the indigenous construction industry has its own advantage. Foreign companies bring in expatriates who can innovate and orchestrate positive changes in the industry. They bring new technologies to keep the system up to date while making sure standards are also raised. Still, without having good strategies in place for capacity building, the longer-term effect of their continued influx will be more detrimental than beneficial. These strategies must give credence to the factors impeding the project delivery capacity of the indigenous construction companies weighed against the importance of the different forms of contribution made by the foreign construction companies.

During the 2015 Builders Conference in Lagos, organised by the Nigerian Institute of Building (NIOB), it was established that the influx of foreign construction companies could affect the economy negatively, if left unchecked. During the conference, the president of the Federation of Construction Industries (FOCI) estimated that Nigeria was losing over N9billion (as of date, N1 = $0.0003) to foreign companies annually. FOCI underscored that while the

services rendered by the foreign companies are of higher quality and standard, the outward movement of capital could affect Nigeria's economy. FOCI also alleged that the expatriates are highly paid notwithstanding their qualifications, resulting in economic drain and an increase in the unemployment rate for local professionals.

1.3 Problem Statement

Since every developing nation needs support from foreign investors, it is obvious that these foreign construction companies will continue to operate in Nigeria. As such, there is a need to investigate how the foreign construction companies can be leveraged for the capacity building of indigenous/domestic construction companies. It is against this backdrop of a challenge in devising a strategy for capacity building that this research seeks to discover how foreign construction companies can be used for capacity building of the indigenous companies to ensure the sustainability of the domestic construction industry.

To substantiate this identified problem, for a long time, there have been concerns about the presence and influence of foreign construction companies in the Nigerian construction industry. This trend does not encourage indigenous involvement, competence enhancement and technological advancement, and encourages depletion of the nation's limited resources, causing continuous worry to stakeholders in the construction industry (Idoro, 2010). However, most indigenous construction companies are often criticised for poor performance due to management incapacity and their inability to plan projects adequately and according to the contract (Ibrahim et al., 2014). This also prevents the Nigerian construction industry from meeting the construction needs of the nation (Ibrahim et al., 2014). These concerns have resulted in various opinions from researchers and experts within the country. Studies have shown that the few large companies, that are mostly foreign-owned, control a high ratio of the market share of the Nigerian construction industry (Ugochukwu, 2014). This trend is not sustainable from the perspectives of capacity building for the domestic construction companies and economic development of Nigeria.

1.4 Research Question

What are the strategies for the foreign construction companies to work with indigenous construction companies in Nigeria for capacity building?

1.5 Aim of the Study

The main purpose of this research is to investigate how the foreign construction companies can work with the domestic construction companies towards capacity building of the domestic companies in the Nigerian construction industry.

1.6 Main Objectives

Below are the objectives of this study: -

- To investigate the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria.
- To investigate the level of importance of the different forms of contribution made by foreign construction companies in the capacity building of indigenous construction companies in Nigeria; and
- To investigate the strategies for the foreign companies needed to work with the indigenous companies for capacity building.

1.7 Importance of the Research

The research comes at a trying time in the history of Nigeria as growth has been on a downward spiral since the fall in oil prices in mid-2014, and the economy is currently in recession (WBN). The World Bank in Nigeria indicated that by 2016, the country's economy had continued to deteriorate further after recording negative growth in the first two consecutive quarters (-0.4% and -2.1% year-on-year in real terms consecutively). Okoye et al. (2016) exposed the construction industry as a destination for investment where emphasis should be placed on growing the economy. The need for construction professionals to collaborate with the government was highlighted in rescuing the nation's economy through the construction sector. Okoye et al. (2016) also indicated that more emphasis should be placed on the construction sector in terms of increasing input, favourable policies, human capital development and capacity building for growing the national economy and facilitating a quick recovery from economic recession.

1.8 Structure of the Report

The report consists of the following chapters:

Chapter One: Introduction

This current chapter gives a background of the study, problem statement, aim and objectives of the study.

Chapter Two: Literature Review

It involves a review of existing literature from reliable and relevant authors and sources. This allows for understanding the Nigerian construction industry and the various companies involved.

Chapter Three: Research Design and Methods

It discusses the research design and methods assumed by means of the onion model as illustrated by Saunders et al. (2009).

Chapter Four: Results, Data Analysis and Discussion

This chapter outlines the process by which the qualitative and quantitative data obtained from the field work were analysed.

Chapter Five: Conclusion

This chapter discusses how the aim and objectives of this study have been achieved in order to answer the research question.

Figure 1.1 below shows the research process adopted for this study.

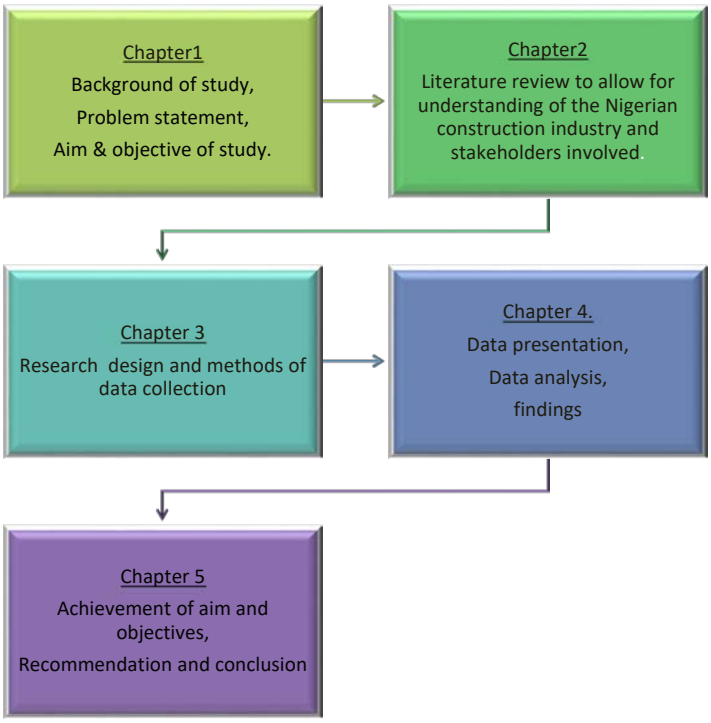

Figure 1.1: Research Roadmap

2 CHAPTER 2: LITERATURE REVIEW

2.1 Overview

This chapter reviews other published books, journals, dissertations and articles to provide an overview of the Nigerian construction industry in general, and the category of contracting companies involved in the industry. The context of capacity is explained, and the major construction company, and its activities, is also discussed.

2.2 Background

The construction industries in all places are characterised by a pyramid structure which shows a multiplicity of small companies and a few large companies (Ofori, 1991). The construction industry is defined as the value of work put in place annually in the residential, non-residential, and civil engineering segments. The residential segment covers houses, dwellings, and similar work (Marketline, 2016). The non-residential segment covers commercial, industrial, social, and similar work. Civil engineering covers infrastructure for transportation, telecommunications, energy, and other purposes. The construction of new buildings, renovations and repair are also included. The industry includes construction of buildings and engineering structures themselves, and preparatory work and completion (demolition, site preparation, electrical and plumbing installation, etc) (Marketline, 2016).

2.3 The Nigerian Construction Industry

The construction industry plays a substantial role in developing the built environment in economies around the world, and the Nigerian construction industry is not exempted from this. A country can only envision or undergo development with a proficient and successful construction industry (Idoro, 2010). The construction industry steers the economic development, therefore retains a vital place in the Nigerian economy. Idoro (2010) regards construction as the number one industry for economic development. The industry contributes to a large portion of the gross domestic product (GDP) of every developing nation. The contribution of the construction industry to the GDP was estimated as 6%-10%. The Federal Ministry of Economic Development (1980) approximated the share of the construction industry to the GDP of Nigeria from 1967/68-1972/73 as 56%-66% and that from 1974/75-1979/80 as 71%-79%, while the Nigerian

government (1984-1986) estimated the average share of construction to GDP as 60%-80% (Idoro, 2012). The construction industry also contributes significantly to the employment capacity of most countries and it accounts for approximately 10% of the workforce of most countries, and even a higher percentage in developing countries (Idoro, 2012). It is stated that, between 1960 and 1970, the building sector of the construction industry alone was responsible for an average of 30% of the total employment in Nigeria (Idoro, 2012). The construction industry is a medium for job creation, training of various kinds and chances to grow. The growth and development of other sectors of the economy can be delayed or hastened by the kind of environment created by the construction industry (Idoro, 2012). The contribution of the construction sector to the nation's GDP from independence to the 1980s ranged between 3 to 6% before dropping to about 1% over the last two decades (Okoye et al., 2016). There was however, an upward progression in the actual contribution of construction sector in the last four years which rose to about 3% in 2012 (Okoye et al., 2016).

2.3.1 The Role of the Construction Industry in the Economy

The construction industry is one of the oldest in the world and is often described as the leading economic sector due to the ability of its activities to predict the general direction of the economy. This shows the importance of the construction industry across generations and developmental stages. The contribution of the construction sector to the total GDP continues to be low (1.4% only of the country's GDP) even though growth has been noticed in the construction sector (Oluwakeyisi, 2011). In 1981, the construction sector accounted for 5.8% of Nigeria's total GDP which had risen approximately 495 times its size in the last 30 years, while the construction sector GDP has only increased to 125 times its size in 1981. This clearly shows that Nigeria is far below achieving its potential in the construction sector in spite of the insufficiency in infrastructure due to the failure of the government to train indigenous companies (Oluwakeyisi, 2011). The construction sector, due to its extensive forward and backward linkages with other sectors of the economy, generates one the highest multiplier effect in terms of economic and social development (Okoye et al., 2016). Almost all other sectors of the economy in one way or another rely solely on the products and services of the construction industry in order to carry out their operations. This means that whatever happens to the

construction sector will directly or indirectly affect other industries (Okoye et al., 2016). The construction industry contributed 10% of the 47.33 million labour force estimated in 2009 in Nigeria (NBS, 2010). The construction sector also accounted for 0.79 % of the new jobs in the formal sector in the fourth quarter of 2014 (NBS, 2015)

2.3.2 Size of the Construction Industry

The construction industry is also the world's largest industrial employer (111 million employees) (Okoye et al., 2016). The Nigerian construction market has recorded a remarkable growth over the years and is rated as one of the biggest markets in Africa. The government expenditure on infrastructure and other factors added positively to the growth of the industry (Odediran et al., 2012). At this early stage of Nigeria's infrastructural development, the government is the main client for most of the construction activities going on with the intention of providing shelter and basic amenities and services, such as roads, electricity, etc. which are vital for Nigerian citizens. These construction activities are carried out mostly by foreign contractors. Odediran et al. (2012) have, however, noted that with the changes in government, transformation agenda and local policies in infrastructural sector, opportunities have been given to indigenous contractors to grow and develop. Construction companies can be categorised into small, medium and large in Nigeria. The indigenous companies are mostly small companies with very few categorised as medium in scale, while the large companies are owned by expatriates (Odediran et al., 2012). Odediran et al, (2012) pointed out the need to assess the makeup of contracting companies who are mostly small scale in function, but perform a large amount of construction activities.

The Nigerian construction industry is relatively small; it was valued about $3.15billion in 2008 making up about 0.2% of the total global construction industry which is valued at about $4 trillion. Regardless of this, the Nigerian construction industry is still a pioneer among all other West African countries (Dantata, 2008). The construction industry continues to lead all other aspect of the Nigerian economy. In 2005, the construction industry more than doubled the average growth of 5.6% of the entire economy by growing at a rate of 12.1% for that year. The Business Monitor International (BMI) group estimated the growth of the industry at a rate of 20% between 2006 and 2007(Dantata, 2008).

2.3.3 Growth of the Construction Industry

The Nigerian construction industry has been growing impressively over the past few years; the industry has outgrown other sectors of the local economy and is well above the global industry average growth rate (Dantata, 2008). Some economists regard the construction industry as the driving force in the development of the country's economy. Almost all other sectors of the economy somehow depend on the products and services of the construction industry to carry out their operations, yet its contribution is still insignificant as compared to other sectors such as mining, agriculture and quarrying (Dantata, 2008). The overall GDP between 2001 and 2005 averaged about 1.44% (NBS, 2006). This figure was projected to rise steadily to about 2.13% in 2008 by the Business Monitor International (BMI, 2007). Also, the industry accounts for about 69% of the nation's fixed capital formation (BMI, 2007). This signifies that about 70% of the net capital investment in the country goes to the construction industry. As mentioned earlier, the contribution from the industry is low when compared to other industries, such as agriculture and manufacturing (Dantata, 2008).

Nigeria saw strong growth in its construction industry during the 2011-2015 periods. The Nigerian construction industry had a total value of $55.2bn in 2015, representing a compound annual growth rate (CAGR) of 10% between 2011 and 2015. In comparison, the South African and Egyptian industries grew with CAGRs of 9.5% and 3.6% respectively, over the same period, to reach respective values of $31.8bn and $9.9bn in 2015.The residential segment was the industry's most lucrative in 2015, with total value of $24.2bn, equivalent to 43.8% of the industry's overall value. The civil engineering segment contributed value of $24.1bn in 2015, equating to 43.7% of the industry's aggregate value. The performance of the industry is forecast to accelerate, with an anticipated CAGR of 9.5% for the five-year period between 2015 - 2020, which is expected to drive the industry to a value of $86.9bn by the end of 2020. Comparatively, the South African and Egyptian industries will grow with CAGRs of 7.5% and 7.3% respectively, over the same period; to reach respective values of $45.7bn and $14.2bn in 2020 (Marketline, 2016). Nigeria's oil exports are a significant source of income. As oil prices are currently (2016) low, there is a risk that Nigeria will have less ability to make public-sector investments, including construction, in future. Nigeria is rapidly urbanising, which will drive

demand for construction in all segments. There was a sharp decline in the growth rate of the construction sector between 2015 and 2016 as a result of the country moving into recession. During 2016, Nigeria's GDP contracted by -1.5% which reflects a difficult year for the country (NBS, 2016). By the second quarter of 2017, there was a 13.80% increase in the growth of the construction sector. During the same period, Nigeria's GDP grew by 0.55%, indicating the emergence of the economy from recession (NBS 2017).

2.4 The Contracting Companies in Nigeria's Construction Industry

Several criteria have been used to categorise contractors, but in Nigeria, the scale of operation can be seen as the most common criterion (Idoro, 2012). This criterion was used by researchers to categorise contractors into indigenous and expatriates. Indigenous contractors are explained by Idoro (2007) as those contractors that are solely owned and administered by Nigerians, while expatriate contractors are conglomerates, usually private companies that are both owned by Nigerians and foreigners, but only run by expatriates. Obviously, the factors that distinguish the two categories of contractors are the ownership of the company and its administration which are either partially or completely run by the expatriate staff. Contractors operating in Nigeria are classified as either indigenous or expatriate. The latter is often given preference over the former in the award of contracts and stakeholders consider this practice unhealthy for growth and development (Idoro, 2010).

2.4.1 History of the Involvement of Foreign Construction Companies

The involvement of expatriate contractors in Nigeria dates back to colonial days with the setting up of Cappa and D'Alberto, the first foreign construction company in 1932. (Idoro, 2012). Idoro (2007) insisted that the contract system surfaced with the arrival of expatriates in Nigeria. At first, the system was adopted by the colonial government for public works and was given incredible support which led to more of these companies being established in Nigeria prior to independence. The author also noticed that before independence, the activities of the expatriates had already been incorporated into government policies, making contracting the approved way of getting public projects.

Idoro (2012) has found that while the expatriate contractors amount to only about 7% of the aggregate number of the contractors in Nigeria, they operate on large scale projects and

account for a substantial proportion of the construction works all over Nigeria. On the other hand, the indigenous contractors outnumber their foreign counterparts and operate on small and medium scale projects which constitute only about 7% of the total value of contracts awarded by the federal government. Idoro (2010) emphasised the lack of promotion of indigenous contractors as one of the problems in Nigeria as opposed to the general perception of attracting foreign participation in the Nigerian construction industry.

Developing countries have largely depended on the importation of machinery, construction materials and skilled manpower due to the deficiency of indigenous construction capacity required to execute much-needed infrastructure to improve living conditions and also to enhance economic growth. Most major construction works are undertaken by foreign construction companies who have already taken over the construction industry (Adams, 1997).

Considerable involvement of international agencies such as the World Bank (1984), International Labour Office (ILO, 1987), and the United Nations Center for Human Settlement (UNCHS, 1984b) indicate their concern towards the development of indigenous contractors in developing countries (Adams, 1997).

2.4.2 Indigenous Construction Companies

Most indigenous construction companies have been sidelined from partaking in major construction projects and are mainly small and medium in size. Even the large-scale indigenous companies are still small compared to the foreign companies that have taken over the industry. Approximately 5% of the civil engineering works and 25% of the building works are carried out by indigenous firms while the foreign companies carry out not less than 85% of both civil and building works put together (Adams, 1997). The foreign companies have now become indigenised foreign companies with Nigerians acquiring between 40 and 60 % of equity ownership as a result of government indigenisation policies. Nonetheless, the top management and technical jobs are still occupied by expatriates (Adams, 1997).

2.5 Capacity of Indigenous Construction Companies

2.5.1 Definition of Capacity

Depending on the message that is required to be communicated, the term capacity is viewed from various perspectives (Offei, 2016). UNESCO (2006) defined capacity as the ability

of individuals, organisations, or systems to perform appropriate functions effectively, efficiently and sustainably. According to Kululanga (2012), the term capacity relates to the abilities, skills, knowledge, learning attitudes, values, relationships, behaviours, motivations, resources and conditions that enable individuals, organisations, institutions and systems to carry out functions effectively, efficiently and innovatively so that they can achieve their development objectives. Offei (2016) stated that anything concerned with the formation of public value is regarded as capacity.

2.5.2 Definition of Capacity Building

UNESCO (2006) defined capacity building as the manner in which the individuals, groups, organisations, institutions and societies improve their capability to execute and perform in the required manner. Kalulanga (2012) also stated that the different methods and tactics involved in the enhancement of performance are referred to as capacity building. From the construction industry's perspective, capacity building is defined as a conscious and managed process that optimises the involvement of the construction industry in meeting national construction demand, in promoting national social and economic development goals, industry performance and competitiveness, and providing enhanced value to clients and society (Kululanga, 2012). Kalulanga (2012), in studying the capacity building of the construction industry, conceptualised it from a systems approach with recognition of the dynamics and interrelationships among a number of determinants at various stages. For the purpose of this research, capacity building is used to mean the establishment of a permissible situation in Nigeria through foreign construction companies for indigenous companies to build their capacities, which is to perform efficiently and competently in order to satisfy national demand.

2.5.3 Importance of Capacity Building to the Indigenous Companies

It was advised by Wells (1985) for the developing countries to develop indigenous construction capacity, because this will have lower the need for foreign-exchange and minimize the effect of international downturns and will also minimise the manufacture of capital goods needed to maintain economic growth in these countries. A drop in the oil revenue and a foreign debt predicament obligated the Nigerian government to introduce a Structural Adjustment Programme (SAP) to restore the economy. With the depreciation of the Naira and the scarcity of

foreign exchange for imports, SAP had increased local sourcing of inputs (Adams, 1997). Programmes initiated to improve indigenous contractors' access to works and bestow financial support were abused, thereby failing in its purpose. Thus, all attempts made to support indigenous contractors to enhance their involvement in the industry were unsuccessful (Adams, 1997).

The Nigerian Enterprises Promotion decree of February 1972 brought the idea of indigenous contractors into the public arena. An indigenous contractor in Nigeria is regarded as a person or private organisation established under the Nigerian enterprise decree of February 1997, its geographical base, capital base and ownership is exclusively Nigerian (Ugochukwu, 2014). These companies range in size from self-employed craftsmen, known as jobbers, who engage mainly in repairs and maintenance of buildings to the very large multi-national or foreign-based construction companies (Ugochukwu, 2014).

In Adams's (1997) view, the first real attention the government ever gave to the development of indigenous construction scope was The National Construction Policy (FRN 1991). Problems like lack of construction materials, labour, tools and funding that confronted the industry were actually dealt with. However, due to the unequivocal nature of the policy strategies, it failed to tackle precisely the subject of indigenous contractors' continuous development. Ibrahim et al. (2014) acknowledged the basis for development of any country is a competent and a successful construction industry. Yiman (2011) emphasised the success of a construction project relies on the contractor, hence their efficiency and ability is a function of performance and yield in the construction industry.

2.5.4 Limitations of Indigenous Construction Companies

The argument on the execution of a project in the Nigerian construction industry revolves around the performance of the foreign and indigenous contractors (Ibrahim et al., 2014). Indigenous contractors are contracting firms wholly owned and run exclusively by Nigerians, while most research shows that there is poor performance and mismanagement associated with indigenous contractors which results in poor planning, poor definition of the scope of work, poor project controls system and general incompetence to perform according to contractual

requirements. (Ibrahim et al, 2014). This has stopped the Nigerian construction industry from addressing the construction needs of the nation (Ibrahim et al., 2014).

The underperformance of the indigenous contractors has added to the failure of the Nigerian construction industry to deliver services successfully. Consequently, the industry is more often than not blamed for being uneconomical, insecure, and inferior and always behind schedule (Ibrahim et al., 2014). Furthermore, construction in other parts of the world cost less than similar projects in Nigeria. Ibrahim et al. (2014) have attributed the underdevelopment of the nation's economy to escalated prices, late delivery and unmet targets. All these factors have led to the inability of the Nigerian construction industry to deal with the shortage of basic amenities, necessary public infrastructure and to an increase number of urban dwellers who are anxiously in need of accommodation (Ibrahim et al., 2014), thereby reducing the nation's goal of vision 20:20:20 as foreseen in the Millennium Development Goals (MDG) target for 2015. As a result of the inefficiency of the indigenous contractors, the expatriates have taken over 95% of the main public projects in the country (Ibrahim et al., 2014). The expatriate send their profits home which will lead to sa hortage in revenue creation and allocation, indigenous contractors with no experience, construction and local industries without worth, an employment rate of 1% compared to the World Bank's average observation of about 3.2% in other developing countries are the various effect to the Nigerian construction industry and the economy as a whole (Ibrahim et al., 2014).

2.6 Factors that Affect the Capacity of Indigenous Construction Companies

In a research conducted by Adams (1997), the four most significant constraints acknowledged were uncertainties in supplies and prices of materials, getting payment, procuring work and access to capital. Other major constraints alleged by Adams (1997) included procuring and maintaining plants and equipment, and meeting contract deadlines. Other constraints on indigenous contractors in most developing countries as identified by Adams (1997) were corruption and fraudulent activities, lack of skilled labour, as well as deficiencies in technical and managerial skills.

Construction is a high-risk venture, so there is a tendency that financial institutions are more critical in evaluating loan applications from contractors. Lack of guarantees and the bad financial management habits of most Nigerian contractors frustrate their applications (Adams, 1997).

Ogechukwu (2006) pointed out that in a small-scale industry, there were shortages and inadequate capital to buy stock and equipment, difficulties in securing loans from banks and financial institutions. The business methods and equipment used are outdated; the non-existence of actual planning strategies makes it difficult to withstand unpredictable economic and business conditions.

Shortage of skills in manpower, poor site management, poor supervision, lack of leadership and breakdown of equipment are some of the factors affecting the project performance in developing countries (Helen et al., 2015).

A study by Ibrahim et al. (2014), also revealed that the Nigerian indigenous companies underperformed in project cost and time, experience project planning challenges, and inappropriately apply project planning techniques in build projects procurement system in Nigeria. The study also recommended Nigerian indigenous companies to employ competent personnel to embark on continuous training and adopt project management methods in the management and planning of construction projects; and the standard form of contract used in Nigeria should be reviewed.

The determinants of business collapse from the view point of SMEBCS in the Ghanaian construction industry, as revealed in Offei (2016) are:

- Suspension of projects of previous government (political instability and interference),
- Financial demand from political heads (corruption),
- Delay in collecting debts by new political heads (delay payments),
- Non-payment of interest on delayed payments,
- Challenge in project planning and control,
- High and unstable inflation,

- Lack of material control system
- Lack of familiarity with estimating techniques and tendering procedures
- Awarding contracts to incompetent political party members (lack of professionalism).

Another study into the factors hindering the development of the construction industry in Uganda by Ketende (2011) revealed that lack of financial capacity and lack of research and development (R&D) in the construction industry are of most critical importance. Katende (2011) also stated there is inadequate capital to finance construction activities in Uganda which makes firms reluctant to invest funds in new technologies while still faced with the challenge of actual execution.

2.7 Preference of Foreign Construction Companies to Indigenous companies

Lately, the tendency of awarding contracts towards expatriate contractors in Nigeria has bothered the public in general. Studies have revealed that clients prefer to go for foreign contractors rather than their indigenous counterparts (Idoro, 2012). The ministerial committee on causes of high government contracts in 1982 established that even though the expatriates charge more and are fewer in number than the indigenous contractors, they still manage to perform over 90% of the total value of construction contracts in Nigeria (Idoro, 2012). This trend does not encourage indigenous involvement, competence enhancement and technological advancement, and avoidable depletion of the nation's limited resources, causing continuous worry to stakeholders in the construction industry (Idoro, 2010).

The challenges of globalisation necessitate that these two types of contractors compete favourably with each other in execution. For indigenous contractors to survive in this prevailing, competitive global market they must be comparable with their foreign counterparts in all aspects of production (Idoro, 2012). Another important factor that influences the competitive position of a company in the market is its project management practices (Odediran et al., 2012). The project management in most developed countries cannot be compared with the Nigerian system. The delay of firms and organisations to embrace formalised practices lead to an adverse effect which includes failure to gain knowledge from shared experiences, delays, over-pricing of projects and under-productivity (Odediran et al 2012). This increases the complexity and complications

associated with construction works which makes it compulsory for the employment of specialist contractors most of whom are foreign contractors. This trend has gradually phased out indigenous contractors. A large section of these foreign construction companies in Nigeria are subsidiaries/allies of European, North American and Asian construction companies, in spite of this, individuals still award building contracts to indigenous contractors (Odediran et al., 2012). Akintunde (2003) stated that the lack of technical competence, deficiency in managerial skills, poor financial management and slow adaptation to modern innovation on the part of the indigenous contractors are some of the reasons for employing foreign contractors in Nigeria.

Based on these factors, new companies have emerged over the years and competition has become fierce for both foreign and indigenous contractors. Still very few indigenous firms have grown their capacity to serve both the private and public sectors. However, Julius Berger Nigeria plc continues to lead in the Nigerian construction market (infrastructure subsector) assets and revenue. Unfortunately, an unfavourable business environment hinders the industry's growth, which continues to be a challenge for all Nigerian industries (Odediran et al., 2012). According to Ugochukwu (2014), the Nigerian Society of Engineers conceived the idea of producing a draft recommendation for the "National Construction Policy" to back up its long-canvassed need for government to take the question of technological development of indigenous capacity more seriously. Later, other interested groups like the Nigerian Institute of Building, the Nigerian Institute of Architects, the Nigerian Institute of Quantity Surveyors, etc., organised seminars and workshops aimed at encouraging the development of indigenous capacity and participation and ultimately, indigenous control of all facets of the construction industry in Nigeria. The situation however, is still far from encouraging (Ugochukwu, 2014).

It is the responsibility of every nation to nurture, develop and equip her contractors with the available projects in order to have the required experience with which to execute all complexities of national construction challenges. But instead of this, government has developed foreign companies neglecting their own contractors who starved of work (Akintunde, 2003).This has helped foreign contractors gain expertise while the Nigerian contractors remain inexperienced and therefore unable to compete with their foreign counterparts. The domineering

attitude of these foreign companies has not given the indigenous construction companies the opportunity of solely executing major engineering projects (Odediran et al., 2012).

2.8 Major Contracting Companies in the Nigerian Construction Industry

The Nigerian construction industry is dominated by international construction companies, though a number of smaller local companies are currently emerging (Oluwakeyisi, 2011). Julius Berger Nigeria Plc is still the number one, as it dominates most of the public-sector construction. However, the emergence of Chinese Construction giants has significantly affected the dominance of Julius Berger. For example, China Civil Engineering Construction Company was selected by the Lagos State Government as the contractor for the Lagos Light Rail Project. The firm was also awarded the rehabilitation of Lagos-Jebba rail track by the Federal Government. The growing popularity of Public Private Partnership (PPPs) also means more international construction firms are likely to come into the Nigerian market. Other medium-size (based on scale of operation) construction firms in Nigeria are as follows: Costain W.A Plc, PW Nigeria, Cappa & D'Alberto, Stabilini Visinoni, Bi-Courtney Limited, Lekki Concession Company, Reynolds Construction Company Ltd., Setraco Nigeria Limited, Gerrawa Global Engineering Limited, Piccolo-Brunelli Eng. Ltd., Philco Nigeria Ltd., Kopek Construction, Niger Construction Ltd., Enerco Limited, Borini Prono and Company Limited, Arab Contractors Limited, Triacta Limited, CGC Nigeria Limited, Standard Construction Limited, Dantata and Sawoe Construction Company Nig, Ltd., and Mother Cat Limited are amongst the high profile construction firms in Nigeria (Oluwakeyisi, 2011).

Ugochukwu (2014) gathered that the combination of the small and medium sized construction companies make up 90 percent of the total registered contractors in Nigeria. These indigenous contractors are characterised by under-capitalisation, under capacity utilisation, understaffing, and are generally managerially handicapped. Over the years, the poor performance of this category of contractors has been a source of concern and worry particularly when compared with their foreign counterparts (Ugochukwu, 2014). Judging by the number of bankruptcies in this group, poor quality work, mismanagement, diversion and embezzlement of project funds, and the general economic depression, the survival and growth of indigenous contractors may be difficult, particularly in view of inflationary trends, the high cost of

construction materials, the high cost of borrowing capital, government policy change in favour of deregulation, and the current wave of global economic meltdown (Ugochukwu, 2014).

According to Oluwakeyisi (2011), a few of the major construction companies that dominate the Nigerian construction market are listed below;

- ✓ Julius Berger Nigeria Plc
- ✓ China Civil Engineering Construction Corporation Nigeria Limited. (CCECC)

Other medium sized construction companies in Nigeria are as follows (Oluwakeyisi, 2011):

- ✓ Cappa & D'Alberto
- ✓ Dantata & Sawoe Construction Company Nigeria Limited (D&S)
- ✓ Setraco Nigeria Limited
- ✓ Costain West Africa Plc
- ✓ PW Nigeria Limited
- ✓ Reynolds Construction Company Nigeria (RCC)
- ✓ Stabilini Visinoni Ltd
- ✓ Bi-Courtney Ltd
- ✓ Lekki Concession Company
- ✓ Gerrawa Global Engineering Ltd
- ✓ Piccolo-Brunelli Engineering Ltd.
- ✓ Kopek Construction
- ✓ Niger Construction Ltd
- ✓ Philco Nigeria Ltd
- ✓ EnercoLltd
- ✓ Borini Prono and Company Ltd
- ✓ Arab Contractors Ltd
- ✓ Triacta Ltd
- ✓ CGC Nigeria Ltd
- ✓ Standard Construction Ltd
- ✓ Mother Cat Ltd

2.9 Summary of Chapter

In this chapter, the general background of the construction industry was discussed. The role of the construction industry to the Nigerian economy, its size and growth were also discussed. There was also a discussion on the various contracting companies in the Nigeria construction industry and the history of the involvement of foreign construction companies in the industry. The literature review also discussed the indigenous construction companies, it revealed the capacity and limitation of the indigenous companies in the construction industry, and the importance of building this capacity was also elucidated. A number of factors affecting the capacity of indigenous companies were looked at and the reason behind the preference of foreign construction companies to indigenous firms was examined. Lastly, the major construction companies in Nigeria were listed. The next chapter examines the methodology followed for the research study

3 CHAPTER 3: THE RESEARCH DESIGN AND METHODS

3.1 Overview

The purpose of this section is to discuss the research design and methods for this study. One needs to decide how they plan to design the study at the very beginning of the study, that is the research design; to understand the stages that the research processes pass through, the researcher must have knowledge of the research philosophy. Most researchers carry out a study to address a problem or answer a lingering question. They commence by finding out the data needed and the way of obtaining such data. A number of data collection techniques are involved in attaining these data, such as interviews, questionnaires, interviews and observation, as well as other secondary data. Nevertheless, the choice of techniques to gather and analyse data signifies the conclusion of the overall research design.

3.2 The Research Process

Saunders et al. (2007) developed the research onion to illustrate the stages through which the researcher must follow when formulating an effective methodology. The first step is the research philosophy, which creates the starting point for the appropriate research approach adopted in the second step. In the third step, the research strategy is adopted, and the fourth layer identifies the time horizon. The fifth step represents the stage at which the data collection methodology is identified. Figure 3 below is a research onion that gives an effective sequence through which a research methodology can be outlined; it can be used for all sorts of research methodology and in a range of contexts (Bryman, 2012).

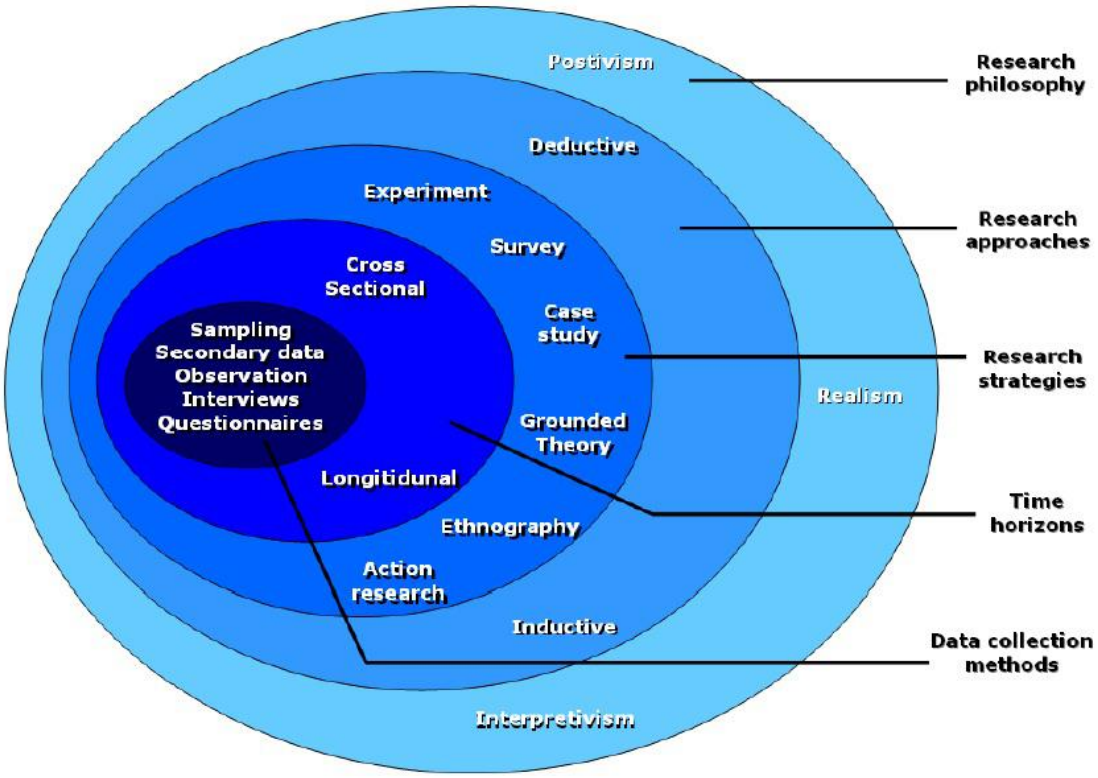

Figure 3.1: Research onion

(Source: Saunders et al, 2009).

3.3 Research Philosophy

A research philosophy refers to the set of beliefs concerning the nature of the reality being investigated (Bryman, 2012). It is the underlying definition of the nature of knowledge. The assumptions created by a research philosophy provide the justification for how the research will be undertaken (Flick, 2011). The research philosophies help the researcher have a better idea as to what research design and approach is best suited for a study. Saunders et al. (2009) further stated that the philosophies adopted in any research influences views of what is acceptable knowledge. A researcher who is concerned with facts will think and act differently from a researcher concerned with attitudes or the feelings of people. The strategies and methods may vary and also views and perspectives (Saunders et al., 2009). Ontology and Epistemology are

two major ways of thinking about research philosophies; each one gives an understanding of the philosophical type useful in a research process (Saunders et al., 2009).

3.3.1 Ontology

Ontology refers to that which is concerned with the nature of reality, and the logical investigation of the various ways in which things are thought to exist (Saunders et al., 2009). Considering the notion and dedication made by researchers about how the world works with respect to particular views, two main ontological frameworks can inform the research process: objectivism and subjectivism (Saunders *et al.*, 2009).

A perspective which depicts that social entities exist independent of other social players concerned with their existence is regarded as *objectivism* (Saunders *et al.,* 2009). Or;

A perspective which holds that social phenomena are as a result of the opinion/actions of the social players concerned with their existence is regarded as *subjectivism* (Saunders *et al.*, 2009).

The ontological point supporting this research is the objectivist position. This is because the level of impact of the factors that affect the capacity of indigenous construction companies in Nigeria exists as outside facts that the researcher can neither reach nor control. Also, the contributions made by foreign construction companies to the capacity of indigenous construction companies are objective realities.

3.3.2 Epistemology

This is concerned with what comprises acceptable knowledge in a field of study (Saunders et al., 2009). The question of epistemology is the relationship between researcher and subject being researched (Ahadzie, 2007). The two main perspectives of epistemology as shown in literature are positivism and interpretivism (Saunders *et al.*, 2009).

A view that regards the social world as real and governed by laws which need to be verified and refined in order to make meaning out of the world is regarded as *positivism* (Creswell, 2009). Creswell (2009) also noted that positivism shows objectivity is maintained, absolute truth cannot be found, and hypotheses are merely tested and not proven.

On the other hand, an approach to qualitative research which deals with the social construction of reality is regarded as *interpretivism* (Creswell, 2009). An interpretivist is against the use of scientific models for social study. Creswell (2009) stated the following assumptions were made concerning interpretivism: a) Meanings are constructed by humans as they engage in the world they are interpreting, b) Meanings are given is based on social interaction with the community, and c) our culture dictates the meaning we attach to the world.

With regards to the epistemological stand of this research, the positivist position is adopted. Thus, objective conclusions could be made from data collected from a detached position without being biased. In this regard, the intention of this research is the identification of ways in which the foreign construction companies can work with the indigenous construction companies towards capacity building of the indigenous companies in the Nigerian construction industry, which could be looked at through a methodical, but easy and gradual approach.

3.4 Research Approaches

Two types of approaches are outlined here: the deductive and the inductive approach.

3.4.1 Deductive Approach

The deductive approach develops the hypothesis or hypotheses upon a pre-existing theory and then formulates the research approach to test it (Silverman, 2013). This approach is best suited to contexts where the research project is concerned with examining whether the observed phenomena fit with expectations based upon previous research (Wiles et al., 2009). The deductive approach thus might be considered particularly suited to the positivist approach, which permits the formulation of hypotheses and the statistical testing of expected results to an accepted level of probability (Snieder & Larner, 2009). However, a deductive approach may also be used with qualitative research techniques, though in such cases the expectations formed by pre-existing research would be formulated differently than through hypothesis testing (Saunders et al., 2007). The deductive approach is characterised as the development from general to particular: the general theory and knowledge base is first established, and the specific knowledge gained from the research process is then tested against it (Kothari, 2004).

3.4.2 Inductive Approach

The inductive approach is characterised as a move from the specific to the general (Bryman & Bell, 2011). In this approach, the observations are the starting point for the researcher, and patterns are looked for in the data (Beiske, 2007). In this approach, there is no framework that initially informs the data collection and the research focus can thus be formed after the data has been collected (Flick, 2011). Although this may be seen as the point at which new theories are generated, it is also true that as the data is analysed, it may be found to fit into an existing theory (Bryman & Bell, 2011). This method is more commonly used in qualitative research, where the absence of a theory informing the research process may be of benefit by reducing the potential for researcher bias in the data collection stage (Bryman & Bell, 2011). Interviews are carried out concerning specific phenomena and then the data may be examined for patterns between respondents (Flick, 2011). However, this approach may also be used effectively within positivist methodologies, where the data is analysed first, and significant patterns are used to inform the generation of results.

3.5 Choice of Data

Data chosen can either be in the form of quantitative or qualitative research; as discussed subsequently.

3.5.1 Quantitative Research

Quantitative research focuses on verifying hypotheses or finding pattern using large amounts of data as the name suggest. This research approach is informed by a positivist philosophy, including feelings and subjective viewpoints. The quantitative approach can be most effectively used for situations where there are a large number of respondents available, where the data can be effectively measured using quantitative techniques, and where statistical methods of analysis can be used (May, 2011).

3.5.2 Qualitative Research

Qualitative research focuses on understanding the important characteristics of typically small samples of data. The qualitative approach is drawn from the constructivist paradigm (Bryman & Bell, 2011). The aim is to investigate how the respondent interprets their own reality

(Bryman & Bell, 2011). An effective means by which to do this is through interviews, or texts, where the response to a question can be open (Yvonne, 2010). Furthermore, the researcher can develop the questions throughout the process in order to ensure that the respondent further expands upon the information provided. Qualitative research is usually used for examining the meaning of social phenomena, rather than seeking a causative relationship between established variables (Yvonne 2010).

3.6 Research Strategy

The research strategy refers to the overall approach that one chooses to integrate the different components of the study in a coherent and logical way, thereby ensuring one will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data (De Vaus, 2001).

The purpose of the research strategy is to make sure that the data obtained allows the research problem to be successfully addressed clearly and reasonably. Without attending to these design issues beforehand, the overall research problem will not be adequately addressed, and any conclusions drawn will risk being weak and unconvincing. As a consequence, the overall validity of the study will be undermined.

3.6.1 Case Study

The appraisal of a specific component or element in order to determine its main characteristics and draw generalisations is referred to as case study (Bryman, 2012). A case study puts forward an insight into the precise feature of a model, and can ascertain the significance of culture and context in differences between cases (Silverman, 2013).

3.6.2 Survey

Survey is a quantitative research strategy which involves the collection of data from a large group of objects in a standardised and systematic manner. It entails sampling a representative proportion of the population (Bryman, 2012). The quantitative data obtained in the survey are analysed empirically using statistical methods. The means of collecting data is usually through observation, questionnaires, interviews, measurement, and construction.

3.6.3 Experiments

Experiments try to assess if results are established by the particular treatment of the group. The impact is assessed by specific treatment to one group while withholding it from another, then establishing how both performed by the results obtained (Creswell, 2009).

3.6.4 Ethnography

The researcher in this study immerses oneself within the cultural and practical framework of the group being studied over a long period of time. Among the data collection techniques is through observation (Robson, 2002).

3.6.5 Action Research

Action research is usually carried out to trigger or persuade changes in policy, practices, innovation which forms the focal point of the research. Improvements are proposed in action research (Robson, 2002).

3.6.6 Grounded Theory

This involves a more than one staged data collection process and the fine-tuning of the categories of information. This research is distinguished with constant comparison of data with emerging categories and the theoretical sampling of the various groups to get as many similarities and differences in the information as possible (Saunder et al., 2009).

3.7 Data Collection

The data collection and analysis rely on the methodological approach used (Bryman, 2012). The steadfastness and strength of the study lies significantly on the type of process used at this stage of the research (Saunders et al., 2007). Data collected are classified into two main categories: primary and secondary

3.7.1 Primary Data

Primary data is that which is derived from first-hand sources. This can be historical first-hand sources, or the data derived from the respondents in survey or interview data (Bryman, 2012). For instance, data derived from statistical collections, such as the census, can constitute primary data. Likewise, data that is derived from other researchers may also be used as primary data, or it may be represented by a text being analysed (Flick, 2011). The primary data is

therefore best understood as the data that is being analysed as itself, rather than through the prism of another's analysis.

3.7.2 Secondary Data

Secondary data is that which is derived from the work or opinions of other researchers. For example, the conclusions of a research article can constitute secondary data because it is information that has already been processed by another. Likewise, analyses conducted on statistical surveys can constitute secondary data (Kothari, 2004). However, there is an extent to which the data is defined by its use, rather than its inherent nature (Flick, 2011). Newspapers may prove both a primary and secondary source for data, depending on whether the reporter was actually present or not. Therefore, the basic difference between the two types of data is established by the use to which it is put in a study, rather than the characteristic of the data itself.

3.8 Data Collection Techniques

A few data collection techniques are discussed below:-

3.8.1 Conducting Interviews

The interview is a data-collecting method which usually involves personal visits to respondents at home or at work. In the interview, the interviewer asks questions from an interview schedule and records the respondents' responses. Interviews are very useful because highly specific data can be obtained in a very short space of time. The interview is also useful in providing a general overview of people's thoughts.

A variety of interview methods exist, these include the standardised (structured), the unstandardised (informal) and the semi-standardised (semi-structured) interview.

3.8.2 Online Questionnaire Survey

An online questionnaire is in the form of a web link survey or it could be sent through an email (Naoum, 2013). For email surveys, the questionnaire is sent via emails using the email addresses of the respondents. For the web based surveys, a direct link to the survey tool is shared with the respondents either through email or other online means. Online questionnaire survey is most suitable when the target is to capture larger diverse views (Sheehan & Hoy, 1999). Low

cost, quick responses and lower chances of unanswered questions are some of the advantages of web based surveys (Bryman, 2012).

3.9 Sampling Technique

A sample is a smaller collection of units from a population used to determine truth about that population (Field, 2005: Chaturvedi, 2013). Sampling techniques have been classified into probability and non-probability sampling techniques (Saunders et al.. 2009; Bryman, 2012).

3.9.1 Probability (Random) Sampling

This is a scheme in which every unit in the population has a chance (greater than zero) of being selected in the sample, and this probability can be accurately determined (Chaturvedi, 2013). Different approaches to probability sampling include: simple random sampling, systematic; stratified; cluster; multi-stage and multi-phase.

3.9.2 Non-probability Sampling

This is a scheme where some units in the population have no chance of being selected in the sample, (also referred to as 'out of coverage') or where the probability of selection cannot be accurately determined (Chaturvedi, 2013). Selections of elements are based on assumptions regarding the population of interest. Non-probability sampling includes: accidental sampling, quota, and purposive. Also, Bryman and Bell (2011); and Saunders et al. (2009) both suggested that a sample size greater than fifty (50) and thirty (30) respectively is sufficient.

3.10 Data Analysis Techniques

Naoum (2013) described two methods of data analysis, namely descriptive and inferential statistical analysis.

3.10.1 Descriptive analysis

This is a data analysis situation that seeks to describe or summarise the data collected on a set of participants that constitute the sample of interest (Mertler & Reinhart, 2016).

3.10.2 Inferential statistical analysis

This deals with collecting and analysing information from samples to draw conclusions, or inferences about the larger population (Mertler & Reinhart, 2016).

3.11 Time Horizon

The final layer of the research onion, before reaching the core, highlights the time horizon over which the researcher undertakes the research (Saunders, 2009). Researches carried out to answer a question at a specific time are regarded as cross-sectional. Cross sectional research, more often than not, makes use of survey or case study as strategies, whereas, researches carried out to address a problem which requires data to be gathered over a long period of time is regarded as longitudinal, and is most likely to use experiment, action research, grounded theory or archival research as the research strategies. (Saunders et al, 2009).

3.12 Justification of Methodology for This Research

This is the second part of the chapter which covers the research methods adopted for this research study in an attempt to answer the following research question:

What are the strategies for the foreign construction companies to work with indigenous construction firms in Nigeria for capacity building?

3.12.1 Philosophical orientation of this research and methods adopted

In this study, the researcher ascertained the existing factors affecting the capacity of the indigenous construction companies in Nigeria and other African countries and the various forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria based on the existing knowledge on the limitations of indigenous construction companies and the preferences of foreign companies to indigenous construction companies. After this assessment, strategies for the foreign and indigenous companies to work together for capacity building of indigenous construction companies in Nigeria were proposed. Literature provided data relating to the factors affecting the capacity of indigenous construction companies and the contributions made by the foreign construction companies to the capacity building of indigenous construction companies. This led to a quantitative assessment of the level of impact of the various factors affecting the capacity of the indigenous construction companies and the level of importance of the different contributions made by foreign construction companies to the capacity building of indigenous construction companies through an online survey.

The quantitative approach for data collection and analysis and the existing knowledge on the limitations of indigenous construction companies and the preferences of foreign companies to indigenous construction companies reflects an objectivism ontological position, while the epistemological position for the research is positivism because the research depends on knowledge of the factors affecting the capacity of indigenous construction companies. In other words, the research applies the existing knowledge factors affecting the capacity of indigenous construction companies and the contributions made by the foreign construction companies to the capacity building of indigenous construction companies in order to propose strategies for the foreign and indigenous companies to work together for capacity building of indigenous construction companies in Nigeria

3.12.2 Data collection technique adopted for this research

The primary data collection technique is in the form of an online questionnaires survey which assessed different factors affecting the capacity of indigenous construction companies and then assessed the level of impact, the contributions made by foreign construction companies to the capacity of these indigenous companies and their level of importance. The online survey option was adopted because the cost and rapid response advantage mentioned above and also this would not involve the researcher travelling all the way to Nigeria to distribute questionnaires.

The emails of registered professionals in the construction industry were readily available from friends and colleagues in that industry. Based on the literature review, a questionnaire was designed including a list of factors affecting the project delivery capacity of the indigenous construction companies in Nigeria (Helen et al., 2015; Ibrahim et al., 2014) as well as a list of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria. A copy of the questionnaire can be found under Annexure 1. A web link of the online questionnaire was also sent to a WhatsApp group of qualified professionals in the Nigerian construction industry. This was of particular advantage to the researcher as the rich pool of respondents were members of that group which was available for sampling.

The questionnaire was divided into four (4) sections, with each section contributing to the attainment of the research objectives, as discussed.

Section A provided a general background and spread of the respondents in terms of their position, the sectors they belong to, the size of their organisations, and their years of working experience.

Section B was linked to the first objective towards assessing the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria.

Section C was linked to the second objective towards assessing the level of importance of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria.

Section D was an open-ended question linked to the third objective towards suggesting strategies for the foreign and indigenous companies to work together for capacity building of indigenous construction companies in Nigeria.

Table 3.1: Summary of research methods used for research objectives

	Objectives	Method used
1	● assessing the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria.	Literature review + Questionnaire
2	● assessing the level of importance of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria.	Literature review + Questionnaire
3	● suggesting strategies for the foreign and indigenous companies to work together for capacity building of indigenous construction companies in Nigeria.	Questionnaire

3.13 Sampling Technique Adopted in this Research

A non-probability sampling technique was adopted. In this case, the research questions made reference to professionals within the Nigerian construction industry, thus making purposive sampling an appropriate method for the Questionnaire. Out of the 110 emails sent, six returned a delivery failure notification, making only 104 valid or active out of which sixty-six (66) responded via email and another twenty-two (22) also responded via the web link, resulting in a total valid response of eighty-eight (88).

3.13.1 Data analysis technique adopted in this research

The analysis of data was based on the categories of the data contained in each section of the questionnaire which were obtained using different means including, multiple selection, close ended questions, open ended questions, 5-point Likert scale questions ranging from highest impact to lower and high and lower to least impact. Descriptive analysis using tables, pie charts, bar chart and histograms was adopted for data presentations. For the Likert scale questions, Mean Quantity Scores was applied using the Statistical Package for Social Sciences (SPSS) The researcher also adopted Ruikar's (2006) average score categorisation which categorised means or averages into; between 0 to 2.5 as low; 2.5 to 3.5 as moderate and equal to or above 3.5 as

high. The adopted technique was considered adequate considering the analysis is largely descriptive in nature.

Figure 3.2 below shows the research process adapted for this study.

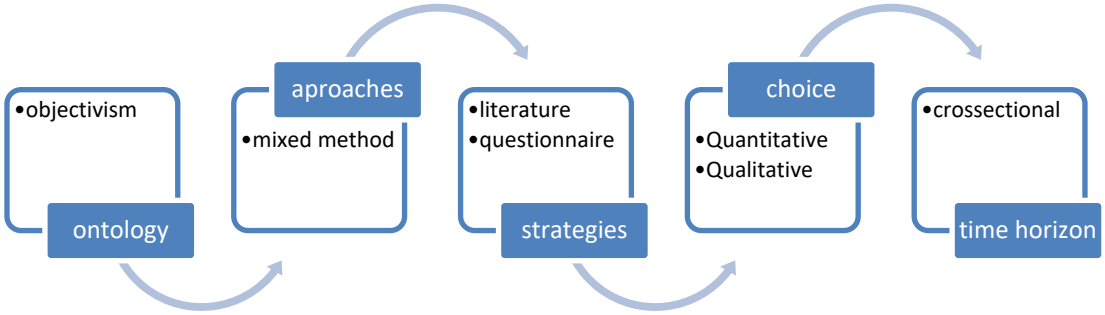

Figure 3.2: Research design flowchart

3.14 Ethical Considerations

The survey was conducted in an ethical manner in order to obtain data. The respondents' identities have been kept anonymous. Results were reported honestly and accurately, irrespective of any relationship that may exist between the respondents and researcher. The researcher has taken a neutral stand and carried out the research with the maximum standard of integrity. The respondents' privacy and anonymity were respected.

Data collected have been evaluated fairly and have not been tampered with in any way. There was a total non-disclosure of any personal information about the respondents and their companies. The researcher made clear the aim and objectives of the research and indicated the method used for analysing and reporting the data. A copy of ethics clearance certificate obtained can be found under Annexure 2.

3.15 Summary of Chapter

In this chapter, two parts were covered. The first part explained different research philosophical views that guided the research instrumentation; choice of data, data collection technique, and sampling and data analysis technique was assessed. In addition, various types of research methods were explored. The second part highlighted the methods adopted in this research. The next chapter presents the results from the survey analysis and then discusses the findings.

4 CHAPTER 4: RESULTS, ANALYSIS AND DISCUSSION

4.1 Overview

This chapter presents the result of the data analysis. The primary data collected and analysed through the **Survey Monkey** online survey tool was exported to respond to the research objectives highlighted in chapter 1.

4.2 Analysis of Study

All the eighty-eight (88) responses received were analysed as follows:

4.2.1 Background, Qualification and Working Experience

All 88 respondents indicated their inclination, mainly to the construction industry. All the respondents were registered members of at least one professional body and perform different job roles as presented in Figure 4.1.

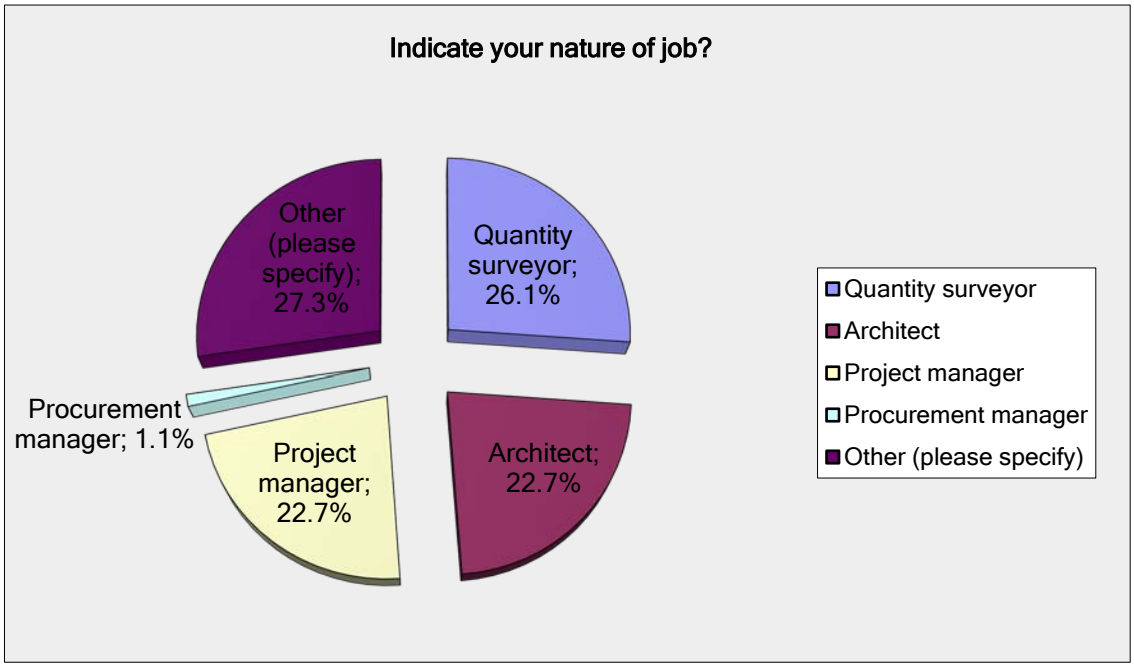

Figure 4.1: Respondents' job specialty

They have also obtained higher education qualifications (notably bachelors, masters or doctorate degree in one relevant construction related field) as presented in Figure 4.2

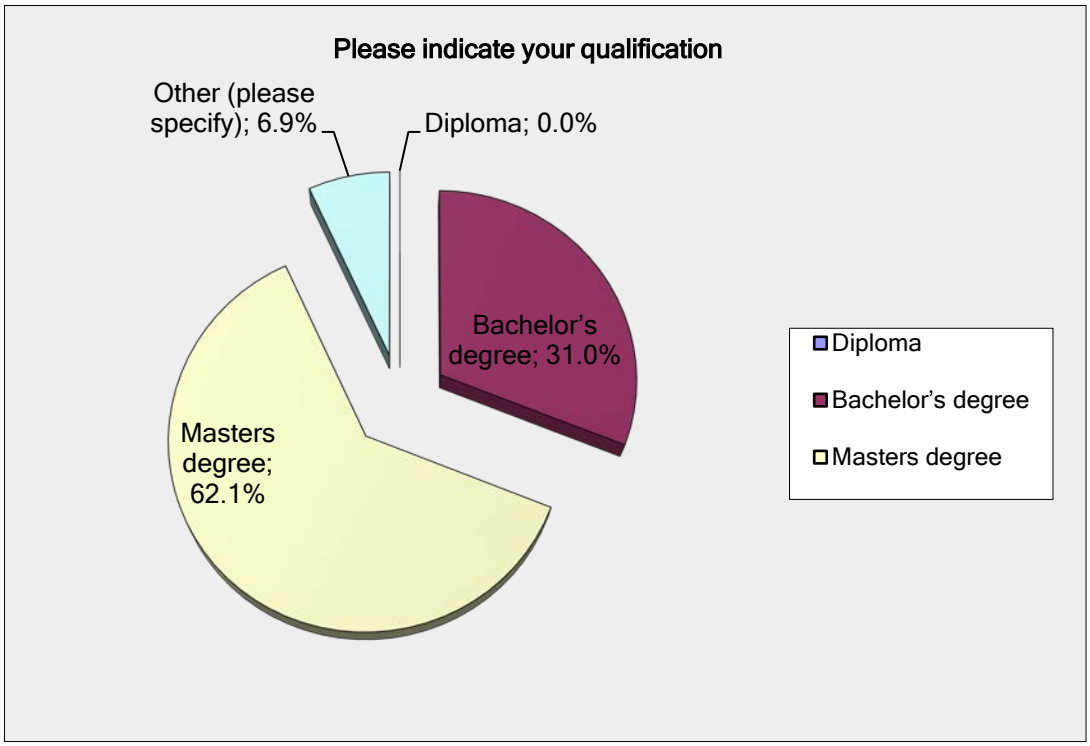

Figure 4.2: Respondents' qualification

They also possessed ample years of working experience as presented in Figure 4.3. This indicates that the respondents have all attained a high qualification in their various fields of study and are relatively experienced; therefore, there was some level of confidence in the reliability of data obtained.

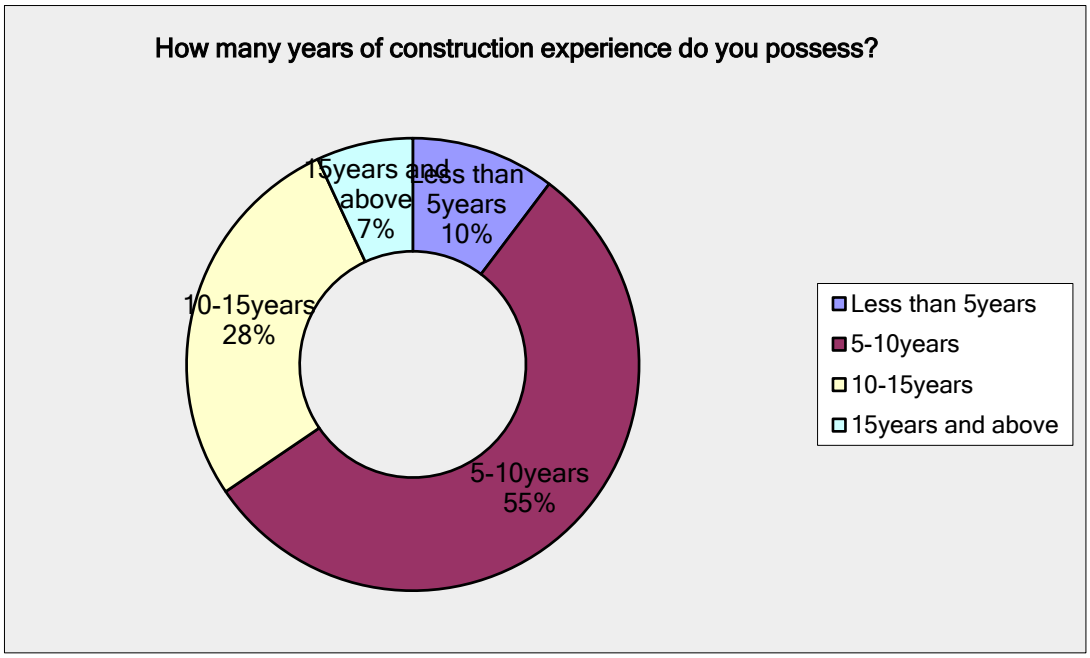

Figure 4.3: Respondents' years of experience

4.2.2 Background of the Organisations

The organisations were majorly located in the northern part of Nigeria. The majority of the respondents (42.5%) indicated that their organisation was a private sector client base (not dealing with government projects) as presented in Figure 4.4.

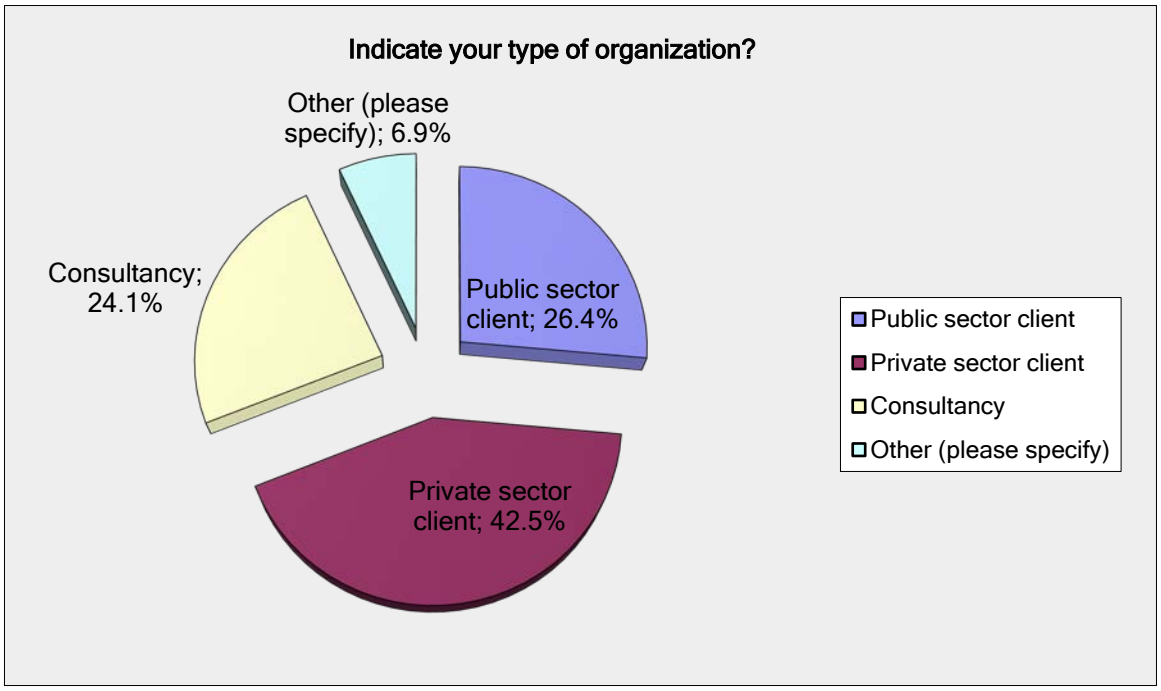

Figure 4.4: Respondents' organisation type

The majority of the respondents (48%) stated that their organisation had been operating between 1 and 10 years as presented in Figure 4.5. About 14% of the respondents indicated that they have been in the business for more than 30 years.

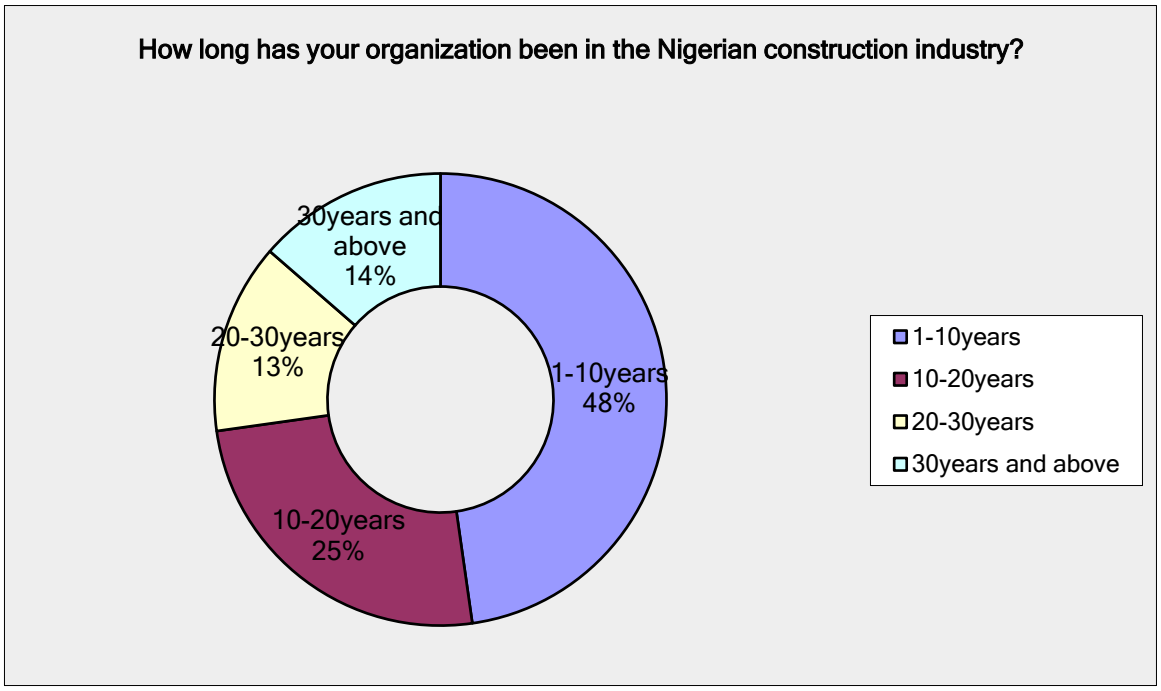

Figure 4.5: Respondents' organisation length of practice

About 65% of respondents also stated their organisations have 1-50 employees indicating a dominance of small scale organisations as presented in Figure 4.6.

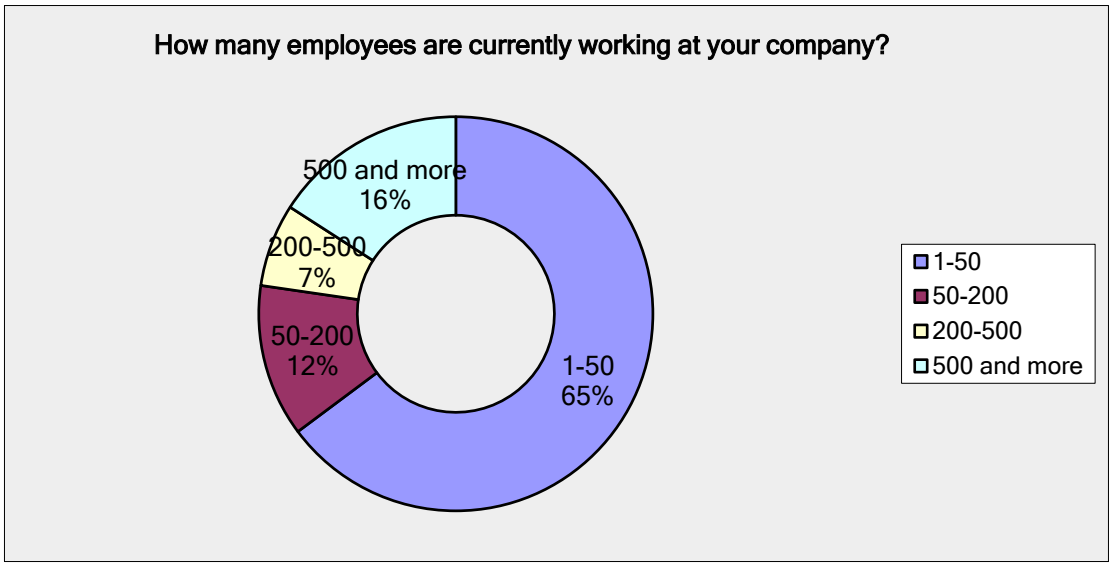

Figure 4.6: Respondents' organisation size

The survey also indicated that the respondents' organisation's main activity is residential buildings, followed by infrastructure and then industrial activities, as presented in Figure 4.7

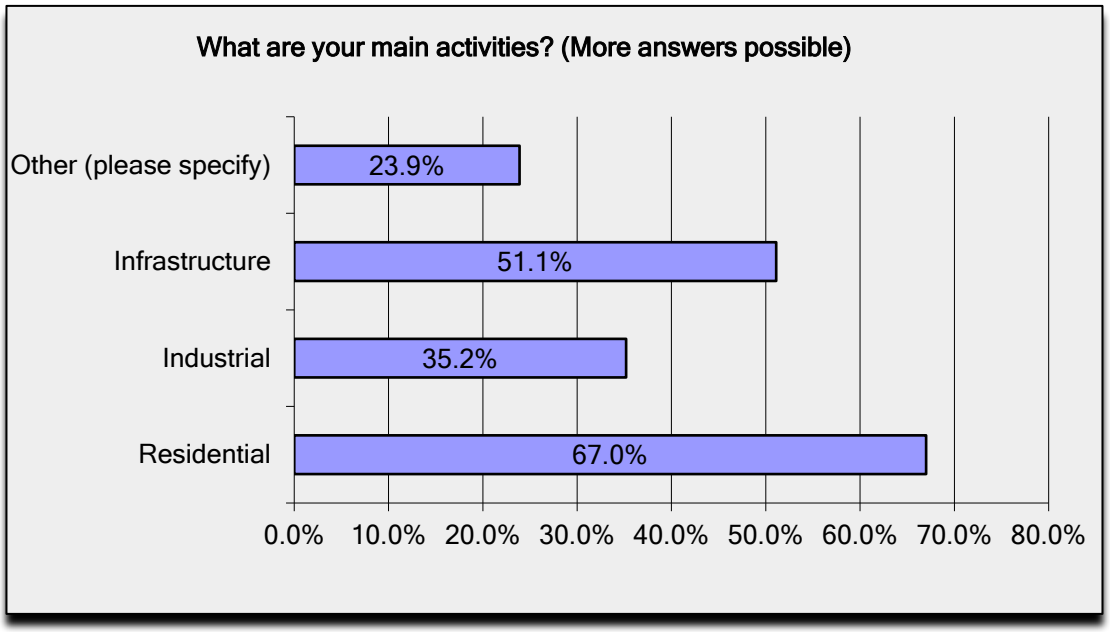

Figure 4.7: Respondents' organisation's main activity

4.2.3 Capacity of Indigenous Construction Companies in Nigeria

With respect to the first objective of this study, Table 4.1 shows the level of impact of the factors affecting the capacity of indigenous construction companies in Nigeria based on the data obtained from the respondents.

Table 4.1: Factors affecting the capacity of indigenous construction companies in Nigeria

The level of impact of the factors affecting the capacity of indigenous construction companies in Nigeria.			
No.	**Answer Options**	**Mean**	**Ranking**
1	Corruption in the construction industry	4.28	1st
2	Delayed payment	4.22	2nd
3	Political instability and interference	3.97	3rd
4	Lack of adequate research and development(R&D) in the industry	3.79	4th
5	Market forces (inflation)	3.78	5th
6	poor adoption in modern innovation	3.72	6th
7	Weak enforcement of contract rules and regulations	3.63	7th
8	Lack of training opportunities	3.60	8th
9	Limited access to credit/loan	3.55	9th
10	Challenges in project planning and control	3.41	10th
11	Lack of financial capacity	3.41	11th
12	Tedious procurement procedure	3.40	12th
13	Poor financial managerial skills	3.33	13th
14	Underperformance in project cost and time	3.32	14th
15	Lack of fair competition	3.31	15th
16	Low level of professionalism	3.26	16th
17	Plant and equipment	3.24	17th
18	Lack of technical competence	3.10	18th
19	Unreliable material supply base	3.10	19th
20	Lack of entrepreneurial skills	3.03	20th
21	Inability to plan project according to contract requirement	2.88	21st
22	Lack of leadership and communication skills	2.86	22nd
23	Lack of familiarity with estimating techniques and tendering procedures	2.38	23rd

Corruption in the construction industry has the highest mean score and thus ranked 1st. This is followed by delayed payment with a mean ranking of 4.22. Political instability and interference

was ranked 3rd with a mean score of 3.97. Other factors such as lack of adequate research and development (R&D) in the industry, market forces (inflation), poor adoption of modern innovation, weak enforcement of contract rules and regulations are rated 4th, 5th, 6th and 7th respectively. Given these findings, much attention should be given to these factors while other factors like lack of familiarity with estimating technique, lack of leadership and communication skills, inability to plan projects according to contract requirement ranked low, so have minimal impact on the capacity of indigenous construction companies in Nigeria

Table 4.2 shows a correlation between the type, size and period of operation of the respondents' organisation and the factors affecting the capacity of the indigenous construction industry.

Table 4.2: Correlation Tabulation

		corruption in the construction industry	delayed payment	political instability	R&D	Inflation	adoption to modern innovation
type of organisation	Public sector client	28.3%	18.6%	40.6%	30.8%	25.9%	36.8%
	Private sector client	37.0%	48.8%	34.4%	46.2%	48.1%	36.8%
	Consultancy	32.6%	27.9%	18.8%	19.2%	18.5%	21.1%
Respondents' qualification	Diploma	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Bachelor's degree	26.1%	30.2%	21.9%	26.9%	37.0%	15.8%
	Masters degree	69.6%	62.8%	62.5%	65.4%	59.3%	68.4%
years of construction experience	Less than 5years	17.8%	4.8%	6.5%	11.5%	18.5%	10.5%
	5-10years	60.0%	57.1%	54.8%	50.0%	55.6%	63.2%
	10-15years	15.6%	33.3%	35.5%	26.9%	22.2%	15.8%
	15years and above	6.7%	4.8%	3.2%	11.5%	3.7%	10.5%
period of operation in the Nigerian construction industry	1-10years	47.8%	48.8%	50.0%	38.5%	40.7%	47.4%
	10-20years	23.9%	20.9%	25.0%	23.1%	25.9%	10.5%
	20-30years	15.2%	16.3%	9.4%	19.2%	18.5%	21.1%
	30years and above	13.0%	14.0%	15.6%	19.2%	14.8%	21.1%
number of employees	1-50	60.9%	69.8%	56.3%	57.7%	59.3%	63.2%
	50-200	17.4%	14.0%	18.8%	19.2%	18.5%	10.5%
	200-500	4.3%	7.0%	12.5%	0.0%	11.1%	15.8%
	500 and more	17.4%	9.3%	12.5%	23.1%	11.1%	10.5%
main activity	Residential	60.9%	65.1%	53.1%	65.4%	63.0%	68.4%
	Industrial	37.0%	34.9%	21.9%	38.5%	29.6%	42.1%
	Infrastructure	60.9%	51.2%	56.3%	53.8%	55.6%	68.4%

It is observed that the category of respondents that indicated corruption in the construction industry, delayed payment, political instability and interference, lack of adequate research and development, inflation and poor adoption of modern innovation have the highest impact were from the private sector clients, well educated (have Masters degree), have moderate working experience (5-10 years), operate on a small scale (1-50 employees), and have not been in existence for more than 10 years in the Nigerian construction industry.

4.2.4 Contribution of the Foreign Construction Companies to Capacity Building

With respect to the second objective of this study, Table 4.3 shows the level of impact in ways in which the foreign companies in Nigeria can contribute to capacity building of indigenous construction companies.

Table 4.3: Contribution of foreign construction companies to capacity in Nigeria

Ways in which the foreign construction firms in Nigeria can contribute to the capacity building of indigenous construction companies			
No.	**Answer Options**	**Mean**	**Ranking**
1	Investment in research and development(R&D) of the construction industry	4.34	1st
2	Encourage foreign companies to provide training and knowledge transfer.	4.30	2nd
3	Foreign companies should invest in local companies that produce materials for construction	4.17	3rd
4	Foreign companies should be encouraged to use local materials (Made in Nigeria goods)	4.10	4th
5	Foreign companies should enter into joint venture with indigenous companies	4.05	5th
6	Foreign companies should subcontract more work to indigenous companies	3.89	6th
7	Foreign companies should provide plant and equipment hire to indigenous companies	3.56	7th
8	Foreign companies should be restricted to only major class A projects	3.21	8th
9	Maintenance work should not be awarded to foreign companies	2.98	9th

Investment in research and development of the construction industry has the highest mean score thus ranked 1st, encouraging foreign companies to provide training and knowledge transfer ranked 2nd while investing into local companies that produce materials for construction by the foreign companies, and the encouragement of the use of local materials (made in Nigeria) by the foreign companies ranked 3rd and 4th respectively. Awarding maintenance work to foreign companies, restricting foreign

firms to major projects ranked low in the survey indicating little significance in their contribution.

Table 4.4: Correlation Tabulation of contribution

		R&D	training and knowledge transfer	encourage use of local material	invest in local companies
type of organisation	Public sector client	28.0%	27.7%	32.5%	30.2%
	Private sector client	42.0%	38.3%	40.0%	41.9%
	Consultancy	22.0%	25.5%	22.5%	23.3%
Respondents' qualification	Diploma	0.0%	0.0%	0.0%	0.0%
	Bachelor's degree	26.0%	27.7%	25.0%	25.6%
	Masters degree	64.0%	63.8%	62.5%	65.1%
years of construction experience	Less than 5years	10.0%	6.5%	12.8%	14.3%
	5-10years	60.0%	63.0%	59.0%	54.8%
	10-15years	24.0%	26.1%	25.6%	23.8%
	15years and above	6.0%	4.3%	2.6%	7.1%
period of operation in the Nigerian construction industry	1-10years	46.0%	46.8%	52.5%	48.8%
	10-20years	30.0%	27.7%	27.5%	32.6%
	20-30years	12.0%	17.0%	10.0%	7.0%
	30years and above	12.0%	8.5%	10.0%	11.6%
number of employees	1-50	66.0%	61.7%	67.5%	60.5%
	50-200	14.0%	17.0%	12.5%	23.3%
	200-500	4.0%	4.3%	5.0%	4.7%
	500 and more	16.0%	17.0%	15.0%	11.6%
main activity	Residential	62.0%	59.6%	62.5%	60.5%
	Industrial	36.0%	31.9%	27.5%	27.9%
	Infrastructure	52.0%	46.8%	47.5%	48.8%

Table 4.4 also shows that the category of respondents who are well educated (have Masters degree), have moderate working experience (5-10 years), operate on a small scale (1-50 employees), and have not been in existence for more than 10 years in the Nigerian construction industry, corroborate the most significant ways in which foreign construction companies can contribute to the capacity of the indigenous construction companies in Nigeria. Particular attention should be given to this category of respondents because of their majority status as they form the bulk of the construction industry in Nigeria.

4.2.5 Strategies for Capacity Building

The last section relating to the last objective was an open-ended question that sought to find out the various strategies that could be recommended for the foreign

and indigenous companies to work together for capacity building of the indigenous construction companies in Nigeria. The strategies recommended by respondents are summarised in Table 4.5.

Table 4.5: Strategies for capacity building

1	Policies to encourage partnership between indigenous and foreign construction companies
2	Indigenous construction companies should engage in different aspect of work contracted to foreign construction companies
3	Policies to encourage foreign companies to sublet percentage of contracts won to indigenous companies
4	Policies to encourage foreign companies to participate in corporate social responsibility(CSR)
5	Policies guiding construction should be adjusted to give indigenous construction companies advantage over their foreign counterpart.
6	Collaboration between indigenous and foreign construction companies
7	Technical skill sharing, training programmes and mentorship for indigenous professionals by foreign companies
8	Subcontracting arrangements with foreign construction companies
9	Enforcement of local content in construction material and workforce.
10	Foreign companies should invest more in training skilled labour and artisans and in the use of contemporary construction methods and equipment
11	Networking through seminars, workshops, conferences, etc. among the indigenous and foreign construction companies

12	More involvement from regulatory and professional bodies
13	Government should incentivise foreign companies who provide capacity building to indigenous companies.
14	Government agencies vested with the responsibility of managing the activities in the construction industry should be more effective in ensuring capacity building of indigenous companies
15	The BPP Act should be enforced towards enhancing the tendering processes in the construction industry.
16	Double standards should be eliminated in the employment of foreign nationals and indigenous workers on the same level with unequal salary schemes.

4.3 Summary of Chapter

This chapter presented the analysis and interpretation of the data from all the sections of the questionnaire survey which were aimed at answering the research questions. The chapter concluded with strategies of capacity building of the indigenous construction companies. The next chapter captured the conclusions and the recommendations of the study

5 CHAPTER 5: CONCLUSION

5.1 Overview

The purpose of this chapter is to wrap up the research work by discussing how each of the objectives was achieved towards meeting the research aim. Also, the limitations to the research are discussed. The chapter also presents recommended ways by which foreign companies can work together with indigenous construction companies for capacity building.

5.2 Achievement of the Research Aim and Objectives

The aim of this research was to find out how the foreign construction companies could work with the indigenous construction companies towards capacity building of indigenous companies in the Nigerian construction industry. To achieve this aim, three objectives were set. The fulfilling of each of the objectives is discussed subsequently.

5.2.1 Factors Affecting Capacity of the Indigenous Construction Companies in Nigeria

The research was used to identify and prioritise the factors that hinder the capacity of indigenous construction companies in Nigeria. Corruption in the construction industry, delayed payment and political instability are the three most critical factors that affect the capacity of indigenous construction companies in Nigeria. Other factors like inadequate research and development (R&D) in the industry, inflation and poor adoption of modern innovations have also had considerable impact on the capacity of the indigenous construction companies in Nigeria.

This implies to enhance the capacity of indigenous construction companies in Nigeria, attention and resources should be directed towards;

- Corruption must be curtailed to the minimum. To seriously minimise corruption in Nigerian construction industry, both the government and professional bodies have to tackle its identified root causes.

- Payment of contractors for completed works should be on time as it is fundamental to ensuring continuity and completion of works within stipulated time, budget and quality performance. Appropriate mitigating measures should be put in place by all stakeholders involved in the project to enable contractors to be paid on time.
- The government should ensure political stability always all the time.
- The government should support professional bodies and both private and public institutions to indulge in R&D by setting aside some funds. The government has a major role to play in improving indigenous contractors' participation in R&D by promoting the development and use of technology.

5.2.2 Contributions of the Foreign Construction Companies to Capacity Building in Nigeria

The research was used to identify and prioritise the most important ways in which foreign construction companies in Nigeria can contribute to the capacity of the indigenous companies. The study shows that investment in research and development (R&D) of the construction industry, encouraging foreign companies to provide training and knowledge transfer, encouraging foreign companies to invest in local companies that produce construction materials and also encouraging the foreign companies to use local (made in Nigeria) materials, were found to be the vital contribution towards the enhancement of indigenous capacity. To contribute to capacity of indigenous construction companies, foreign companies should:-

- Invest in local research and development centres and network with indigenous contractors to keep updated on new discoveries and inventions by organising workshops and seminars.
- Be restricted to the use of locally made building materials. This could be encouraged by systematically reducing the importation level of construction material from other countries; this importation allows inflation from other countries to be transferred in to Nigeria. The government should also involve

professionals in the built environment in policy making as sometimes the government policies result in increases in the prices of construction materials.

- Continue training of staff in both foreign and indigenous construction companies, this will go a long way in increasing the capacity of the construction industry. This is to enable knowledge and skill and also to keep staff abreast of new innovations and modern construction methods.

5.2.3 Strategies for Capacity Building of Indigenous Construction Companies in Nigeria

Lastly, the strategies recommended for foreign and indigenous companies to work together for capacity building of the indigenous construction companies in Nigeria include;

- Joint venture between foreign and indigenous construction companies as a means of knowledge transfer. Government should tighten joint venture policies and appoint professionals to monitor and ensure transfer of relevant construction and material technology.
- Government should encourage foreign investors by regulating the construction industry by enacting favourable policies which will encourage the foreign and indigenous companies to work together for mutual benefit,
- Policies to encourage foreign companies to engage or subcontract work to indigenous companies should be put in place and implemented.

5.3 Research Contributions

This section presents the contributions that this research work has made through its outcomes. Firstly, the study has been able to bring to the fore the factors that have the highest level of impact on the capacity of indigenous construction companies in Nigeria. This will give researchers and decision makers an insight on areas that need attention.

Secondly, the study clarifies the level of importance of different forms of contribution made by foreign construction companies to the capacity of indigenous construction companies. This will be helpful in the country's pursuit for adopting a

sustainable economy which requires, among other things, developing the Nigerian construction industry.

Lastly, this study explored possible strategies that could be implemented to enable the foreign and indigenous companies to work together to enhance the capacity of indigenous construction companies in Nigeria.

5.4 Research Limitations

- The sampling technique adopted for this research does not allow for generalisation to be made beyond the sample population. Thus, the findings cannot be representative of the entire construction professionals registered in the northern part of Nigeria.
- Still on the sampling technique, since the research has made use of an online questionnaire survey, there is a possibility of receiving a skewed response which might not represent the various categories of respondent
- The time constraint limited the researcher to using a quantitative approach only as mentioned in chapter3.
- Finally, the research is also limited by the level of expertise and knowledge of the researcher as this is the first time the researcher is carrying out this type of research.

5.5 Recommendations for Future Study

It is also recommended that more robust methodology be adopted for further studies which would not only be more generalisable, but also provide more in-depth assessments of the issues discussed in this research. It is also recommended that further studies should be conducted in order to ascertain the barriers to the implementation of the suggested strategies in building the capacity of the indigenous construction companies in Nigeria.

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ANNEXURE 1

INVITATION TO PARTICIPATE AND SURVEY

School of Construction Economics and Management

University of Witwatersrand

Private Bag 3

Wits

2050

Company Address

Dear Sir/ Madam

REQUEST FOR SURVEY PARTICIPATION ON THE FOLLOWING RESEARCH TOPIC

The contributions of foreign construction companies towards capacity building of indigenous construction companies in Nigeria

I am Aisha Shuaib Makarfi, a Masters student from the Department of Project Management in Construction in the School of Construction Economics and Management at the University of Witwatersrand. I am carrying out research that investigates the contributions made by foreign construction companies towards capacity building of indigenous construction companies in Nigeria. In order to answer the research question, what are the strategies for the foreign construction companies to work with indigenous companies for capacity building of the indigenous construction in the Nigerian construction industry?

The main purpose of this research is to investigate how the foreign construction companies' can work with the indigenous construction companies towards capacity building of the indigenous companies in the Nigerian construction industry. The three objective of the study is to investigate: (1) the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria, (2) the level of importance of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria; and (3) the strategies for the foreign firms to work with the indigenous companies for capacity building The survey should take about 30 minutes of your time. I assure you that your identity and that of your company or firm will be left anonymous. For further information on the research you can contact the researcher Aisha Shuaib Makarfi, +27737000255, 794564@students.wits.ac.za, or my supervisor, Dr Oluwayomi Babatunde, 0117177658, oluwayomi.babatunde@wits.ac.za.

Thank you for your participation.

CONSENT FORM

NAME OF RESEARCHER: Aisha Shuaib Makarfi

PROJECT TITLE: The contributions of foreign construction companies towards capacity building of indigenous construction companies in Nigeria

AIM OF RESEACH: The main purpose of this research is to investigate how the foreign construction companies' can work with the indigenous construction companies towards capacity building of the indigenous companies in the Nigerian construction industry.

OBJECTIVES OF THE RESEARCH:

1) To investigate the level of impact of the different factors affecting the project delivery capacity of the indigenous construction companies in Nigeria.
2) To investigate the level of importance of the different forms of contribution made by foreign construction companies to the capacity building of indigenous construction companies in Nigeria; and
3) To investigate the strategies for the foreign companies to work with the indigenous companies for capacity building

Please tick in the box after each statement to indicate your consent.

1.	I confirm that I have read and understood the Consent letter attached in front for the above titled study and I have had the opportunity to consider the information contained therein.	
2.	I have been made aware of the purpose of the study.	
3.	I understand that my participation is voluntary and that I am free to withdraw it anytime.	
4.	I understand that my participation is anonymous and confidential.	
5.	I agree to take part in the study.	

Name of person taking the consent _____ Date _____ Signature _____

SECTION A

General information

1. Indicate your type of organization?
   - Public sector client
   - Private sector client
   - Consultancy
   - Others (please specify)

2. Where in Nigeria is the organization located?

3. Please indicate your qualification
   - Diploma
   - Bachelor's degree
   - Masters degree
   - Others (please specify)

4. Indicate your nature of job?
   - Quantity surveyor
   - Architect
   - Project manager
   - Procurement manager
   - Others (please specify)

5. What professional association do you belong to?

6. How many years of construction experience do you possess?
   - Less than 5years
   - 5-10years
   - 10-15years
   - 15years and above

7. How long has your organization been in the Nigerian construction industry?
   - 1-10years
   - 10-20years
   - 20-30years
   - 30years and above

8. How many employees are currently working at your company?
   - 1-50
   - 50-200
   - 200-500
   - 500 and more

9. What are your main activities? (More answers possible)
   - Residential
   - Industrial
   - Infrastructure
   - Others (please specify)

SECTION B

Kindly rank the level of impact (from 1 = least impact to 5 = highest impact) of the following factors affecting the capacity of the indigenous construction companies in Nigeria. Tick in the box to indicate the level of impact.

	FACTORS	**RANKING**				
		Least 1	**Lower 2**	**High 3**	**Higher 4**	**Highest 5**
1	Inability to plan project according to contract requirement					
2	Lack of familiarity with estimating techniques and tendering procedures					
3	Underperformance in project cost and time					
4	Challenges in project planning and control					
5	Lack of adequate research and development(R&D) in the industry					
6	Corruption in the construction industry					
7	Political instability and interference					
8	Low level of professionalism					
9	Lack of technical competence					
10	Lack of financial capacity					
11	Poor financial managerial skills					
12	Market forces (inflation)					
13	poor adoption in modern innovation					
14	Limited access to credit/loan					
15	Lack of leadership and communication skills					
16	Tedious procurement procedure					
17	Lack of entrepreneurial skills					

18	Weak enforcement of contract rules and regulations					
19	Unreliable material supply base					
20	Lack of training opportunities					
21	Lack of fair competition					
22	Delayed payment					
23	Plant and equipment					
	Others (please specify)					

SECTION C

Kindly rank the level of importance of the following ways in which the foreign construction firms in Nigeria can contribute to the capacity building of indigenous construction firms

	FACTORS	**RANKING**				
		Least 1	**Lower 2**	**High 3**	**Higher 4**	**Highest 5**
1	Encourage foreign companies to provide training and knowledge transfer.					
2	Foreign firms should subcontract more work to indigenous companies					
3	Foreign firms should provide plant and equipment hire to indigenous companies					
4	Foreign firms should enter into joint venture with indigenous companies					
5	Investment in research and development(R&D) of the construction industry					
6	Foreign companies should be encouraged to use local materials(Made in Nigeria goods)					

		Least 1	Lower 2	High 3	Higher 4	Highest 5
7	Foreign companies should be restricted to only major class A projects					
8	Maintenance work should not be awarded to foreign companies					
9	Foreign companies should invest in local companies that produce materials for construction					
	Others (please specify)					

SECTION D

In your opinion, what strategy would you recommend for the foreign and indigenous companies to work together for capacity building of the indigenous construction companies in Nigeria?

…….

…….

…….

……

End of Questionnaire and thank you for your time and assistance

ANNEXURE 2

School of Construction Economics & Management

University of the Witwatersrand, Johannesburg -PO Box 20, Wits 2050, South Africa • Tel: +27 (0)11 717 7652/77669 · Fax: +27 (0)11 717 9729 Email:CEM@wits.ac.za

SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT RESEARCH ETHICS COMMITTEE

CLEARANCE CERTIFICATE **PROTOCOL NUMBER** CEM/16/11/ASM/MSC

PROJECT TITLE: The contributions of Foreign Construction Company towards capacity building of indigenous construction firms in the Nigerian Construction Industry

INVESTIGATOR **Aisha Shuaib Makarfi** 794564

SCHOOL/DEPARTMENT **SCHOOL OF CONSTRUCTION ECONOMICS AND MANAGEMENT**

DATE CONSIDERED 01/12/2016

DECISION OF THE COMMITTEE Approved conditionally with respect to the declaration.

EXPIRY DATE 30th November 2017

DATE 03 December 2016

CHAIRPERSON _____
Dr. Kola Ijasan

cc: Supervisor: Dr O K Babatunde

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **ONE COPY** returned to the Secretary Mrs. M. Sithole at the CEM reception desk.

I fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

_____ _____
Signature **Date** 5, 12, 2016