DETERMINATION OF THE PROSPECT OF PARTNERING AS PROCUREMENT METHOD IN THE NIGERIAN CONSTRUCTION INDUSTRY

BY

Aisha Sani BARDE, BSc Building, (ABU) 2009
M.SC/EVN-DESIGN/22980/12-13

A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF SCIENCE DEGREE IN CONSTRUCTION MANAGEMENT

DEPARTMENT OF BUILDING,
FACULTY OF ENVIRONMENT DESIGN
AHMADU BELLO UNIVERSITY,
ZARIA, NIGERIA

February, 2016

Declaration

I declare that the work in this dissertation entitled “Determination of the Prospect of Partnering as a procurement method in the Nigerian construction Industry” has been carried out by me in the Department of Building Faculty of Environment Design. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other institution.

Aisha Sani BARDE		
Name	Signature	Date

Certification

This dissertation entitled DETERMINATION OF THE PROSPECT OF PARTNERING AS A PROCUREMENT METHOD IN THE NIGERIAN CONSTRUCTION INDUSTRY by Aisha Sani BARDE meets the regulations governing the award of the degree of Master of Science in Construction Management of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

Dr. D. Kado		
(Chairman, Supervisory Committee)	Signature	Date
Dr. A.M Stanley		
(Member, Supervisory Committee)	Signature	Date
Dr. D. Kado		
(Head of Department)	Signature	Date
Prof. K. Bala		
(Dean School of Postgraduate Studies)	Signature	Date

Dedication

This work is dedicated to my beloved grandfather Dr. Sheikh Ahmad Lemu, (OFR) who has been my source of inspiration and the mastermind behind my Master's Degree program. You have always been a promoter of education (both Islamic and Western). Words cannot express my sincere gratitude for all the support you have rendered, both financially, morally and spiritually. Your words of advice ''Allah First in all your affairs both in words and action" serve as a constant reminder and shall always remain in our hearts, now and always. *Jazakallahukhairan.* May Allah reward you with Al-JannahFirdaus

This work is also dedicated, to my mother (HajiyaAminaLemu) and all other family members whose memories shall always be part of us forever. May Allah have Rahma on the souls of the departed and may Al-jannahfirdauws be your final abode.

Acknowledgements

All praise and gratefulness are to Almighty Allah for His never ending provisions, wisdom, guidance, protection and numerous bounties. My gratitude goes to Him who made me amongst the privileged to have furthered my studies and acquire a master degree at this point in time.

My unreserved appreciation goes to both my major and minor supervisors Dr. D. Kado and Dr. A.M. Stanley, for the supervision and assistance rendered in the course of this research work despite other commitments; much sacrifice was made to go through my work and make corrections, suggestions and advice without which the work would not have been successfully completed. Sincere gratitude is also expressed to Prof. M.M. Garba, Prof K. Bala, Prof. I. Mbamali, Prof. O.G Okoli, Dr. A.D AbdulAzeez, Dr. I.H Mshelgaru, Mal Mustapha, Mallam Mansur Dodo, Dr. D. Dahiru and all other lecturers and staff within and outside the department for assisting during the course of the research work.

My earnest and heartfelt appreciation goes to my grandparents Dr. Sheikh Ahmad Lemu and his wife Hajiya Aisha M. Lemu and AlhajiShuaibuBarde and his wives for their moral, spiritual and financial support. To my parents Alhaji Muhammad SaniBarde, Amamatu and Fatima SaniBarde, my brothers Sheikh Ahmad, Mohammed Falalu and my other siblings.

My extreme gratitude also goes to my uncles and to my aunties; Alhaji Adam, NurudeenLemu, Alh. Salisu, Alh. SadisuBarde, Hajiya Aisha (YanNaima), Hajiya Fatima, HajiyaRahimaAbdulsalam, Aunty Rahma Sheikh Lemu and all my uncles and aunties I have not mentioned and who are always there for me.

HabeebahNdakpayi, Hajara Khalid, Fatima Sulieman, Fatima Alhassan, Member, DrShehuAbubakar, Dr Mohammad Saganuwa, Mohammed Salim Umar (YaBauya), Hafeez Mohammad (YaHafeez), HaliluPai (YaUba), ShuaibuGimba, AbudulGaffarShiyimbade, SanusiGambo, Kabiru Umar, Hillary, Aminu (Ba katine), Osuji, Ashafa, Abbas, Issac, Okpanachi, and all other friends, colleague, course mates, cousins, and well-wishers whom I have not mentioned and have directly or indirectly contributed to the success of this research, I sincerely say thank you. My sincere thanks also goes to Alhaji Ibrahim Suleiman, his wife HajiyaUwaniSulieman and all their family members, MallamSalihu (BabanSarki) and his entire family members who are always there for me and served as my guardians during my stay in Zaria. I say *Jazakummullahukhairan*.

Lastly, to the Director, Head of Departments and all the members and staff of National Population Commission (Minna), I am honored to be part of your organization and to have such supportive and understanding colleagues and director. Thank you all and May Allah continue to guide and protect us all in our various endeavors, *Jazakummullahukhairan*.

Abstract

Due to the complex nature and characteristics of the industry, adversarial attitudes are usually involved and therefore, new ways in carrying out management processes to attain an improved performance and a qualitative project delivery in the industry is necessary. Partnering is a set of strategic action that deliver marked improvements in construction performance and project success will be attained more readily than the other traditional management approaches. The determination of the Prospect of Partnering as a Procurement method in the Nigerian Construction Industry was achieved by investigating the awareness, applicability, benefits and challenges of partnering as a procurement method. Structured questionnaire was administered and analyzed by percentage using Statistical Product for Social Sciences (SPSS) and a Relative Importance Index (RII) was used for ranking. Tables and charts were subsequently used to express the results as descriptive presentations. Inferences were made from the analysis carried out and high percentage responses were indicated on the level of awareness of partnering in the industry with 90.0%, 91.7%, and 77.0% as indicated by the Clients, Contractors and Consultants respectively. On the level of applicability however, there was little indication of just 5.0% and 6.8% from the Contractors and Consultants respectively, but high percentage response was indicated for the Clients with a percentage response of 87.9%. On the most beneficial factor in implementing partnering in the Nigerian Construction Industry, 'Achieving better buidability', 'reduction in the rate of litigation' and 'better opportunity for innovation and value engineering' were identified with RII values of 0.96, 0.76 and 0.86 as seen by the clients, contractors and consultants respectively. On the challenges of implementing partnering, both the clients and contractors share the same view noting that 'inadequate knowledge and skills of partnering processes

pose the highest challenge with a very high RII value of 1.0. However, the consultants viewed ‘Corruption’ also with a very high RII value of 0.99 as the most challenging factor this procurement method. It is recommended that both the consultants and the contractors should adopt partnering as a procurement method especially for large projects in order to gain the benefits of such procurement process.

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Due to the complex nature and unique characteristicsof the construction industry, construction projects rely on the efficient organization at all levels of the teams involved, including the clients, architects, engineers, contractors and materials providers. A construction project must proceed through stages of concept, scheme design, bidding, contracting, construction, service and maintenance (Chen and Wu, 2010).As suggested by Chen and Wu (2010), construction projects rely on integrated efforts of several hierarchically linked parties (including clients, architects, engineers, general contractors, suppliers and subcontractors) using their differentiated technology, knowledge and skills. These parties are usually independent organizations with different objectives and goals, operating processes and management styles.

Partnering isdefined by Al-Amoudi(2011), as a strategic commitment between companies or firms in order to develop their performance in a mutual project.It is a strategic action that delivers marked improvements in construction performance. It is driven by a clear understanding of mutual objectives and co-operative decision- making by multiple firms all focused on using feedback to continuously improve their joint performance **(**Chen and Wu 2010). Although the definitions of partnering in construction vary from one study to another, thereexists a common consensus on the key elements of partnering; co-operation and teamwork, commitment, mutual trust and respect, communication, equity, responsiveness

toproblems, continuous evaluation, common goals and joint problem resolution(Hong *et.al*,2012).

In a Partnering arrangement, the fundamental components are formalized mutual objectives, agreed problem resolution methods and an active search for continuous measurable improvements (Adnan *et.al* 2011).Hong *et.al*(*2012*) viewed partnering as structured management approach with the objective project performance measures, usually denoted by signing on a partnering charter,launching regular partnering workshops, developing a partnering performance monitoringmatrix and establishing an agreed issue resolution mechanism.Consequently, it is necessary to replace traditional relationships with a shared culturewithout regard to organizational boundaries. Such relationship is based on trust, dedicationto common goals, and an understanding of individual expectations and values(Chen and Wu 2010).Unlike other systematic approach to management such as management contracting, construction management, design and build among others, partnering focuses upon the importance that all parties have to play in the construction process as opposed to the 'top down' approach (Naoum, 2001).The ultimate goal of partnering is be to achieve a "win-win" situation for all parties(Adnan et.al 2011).

In the construction or building industry,Partnering is a disputes prevention mechanism among parties, leading to construction projects being delivered quickly, efficiently and cost effective as it is intent to avoid or solve disputes thereby reducing the cost of litigation and arbitration (Okae-Adow 2013). Partnering enables the industry to understand more clearly its clients' needs and objectives including improved efficiency and cost-effectiveness, increased

innovation opportunities and the continuous improvement of quality products and services (Adnan *et.al* 2011).

Chen and Wu, (2010) posit that many articles have been written on partnering. Most of those papers however, are based on theory, and very few or no empirical data are available on perceived critical success and failure factors of partnering in the construction industry. Partnering appears to be a device that encourages greater integration of the project team and create competitive advantages to all that participate in the project (Naoum, 2001).

1.2 Statement of Research Problem

According to Naoum (2001), most procurement systems are adversarial by design and still rely much on contractually explicit procedures rather than on mutually agreed methods to achieve financially sound objectives for all the team.The idea of partnering has attracted a lot of attention in construction practices and is proposedas one of the best solutions to address the availability of limited projects in the construction industry (Adnan *et.al* 2011).Chen and Wu, (2010) opined that, in traditional construction contracts, each team involved in a project acts independently, which frequently causes communication and co-operation problems that impact production and efficiency. In construction industry,there is usually an adversarial attitude between contractor and designer, or client (Al-Amoudi 2011).

In Nigeria the concept of partnering is new; awareness is low and the potential benefits not yet understood or explored by stakeholders (Najimu 2012).However, Awodele (2014) argued that, there is huge embrace of partnering as alternative due to perceived failings of traditional system of procuring construction contract that calls for changes.There are many abandoned

projects all over due to improper planning and there is also no succession plan in Nigeria leading to a lot of completed projects not utilized (Ekung*et.al*, 2013). Due to this, there is a need to assess the prospects of partnering in the Nigerian construction industry.

1.3 Justification of the Study

As stated by Chen and Wu, (2010), Construction firms are now searching increasingly actively for better management approaches for maintaining a competitive advantage and improving performance. As a result of theincreased growth in the use of partnering,many researchers have investigated the benefits achievedby the partnering process(Naoum, 2001).

Chen and Wu, (2010)also stated that, "because of differences in professional background, technology, knowledge and perspective among participants, problems in communications and cooperation are commonplace, often compromising project performance and results". Previous studieson partnering, suggest that project success will be derived more readily than other traditional management approaches.

According to Oyedele (2013), Construction projects in Nigeria suffer from "capital flight, capital stagnation and capital sink''. The construction industry is neither organized nor controlled, underfunded, highly litigious and has high appearance record in Nigerian court, high rate of entry and exit by contractors, high turnover of employees and the life-span of construction project in Nigeria is unpredictable. Therefore, improvements on efficient management processes and qualitative project delivery, is anticipated to be achieved with the implementation of partnering as a procurement method in Nigeria.

1.4 Aim and Objectives

1.4.1 Aim

The aim of the research work is to determine the prospect of partnering as aprocurement method in the Nigerian construction industry with the view to propose improvement on efficient quality practices of project delivery.

1.4.2 Objectives

The aim of the study was achieved using the following objectives;

1. To determine awareness of the concept of partnering as a procurement method in the Nigerian Construction Industry.
2. To determine the applicability of partnering as a procurement method in the Nigerian Construction Industry.
3. To identify the benefits ofusing partnering as a procurement method in the Nigerian Construction Industry.
4. To identify the challenges of using partnering as a procurement method in the Nigerian construction industry.

1.5 Scope and Limitations

1.5.1 Scope

This research determined the prospect of partneringas a relatively new procurement method in the Nigerian Construction Industry and considers only the clients, contractors and consultantsas the respondents.

1.5.2 Limitations

Limited literatures that covered issues relating to partnering in Nigeria posed great limitation to this work.Abuja (the Federal Capital Territory of Nigeria) was considered as the area of study for the research. The rationale for the selection of Abuja as the area of study was due to the numerous construction activities in the study area. The generality of the research findings was also affected by limited respondents.

CHAPTER TWO
LITERATURE REVIEW

2.1 Construction Industry

Wahab (2010) relates construction to the erection or assembly of large structures. Ekung*et.al,* (2013) defines the construction industry as that section of the economy responsible for the production and management of both the living and working environment of the whole population and the entire built environment. Oyedele (2013) opined that, the construction industry can be divided into three major segments; the Construction of building by Building Contractors, or General Contractors(building of residential, industrial, commercial, and other buildings). The second category is the Heavy and Civil Engineering Construction(building sewers, roads, highways, bridges, tunnels, and other projects) and the Specialty Trade Contractors who perform specialized activities relating to construction(such as carpentry, painting, plumbing, tiling, and mechanical and electrical works form the third segment.

The importance of the construction industry to national development cannot be overemphasized considering the fact that at least 50% of the investments in various development plans is primarily in construction (Okeola, 2009). It is against this background that the construction industry has been recognized concurrently as a major economic force (Adnan *et.al,* 2011).Wahab (2010) opined that, the construction industry is important in any nation's economy as it contributes to the process of development. It equally has many features that set it apart from other industries and which accentuate the need for professional engagement.

The team for project is assembled from a disparate collection of professionals, subcontractors, craftsmen, artisans, laborers and suppliers within and outside the industry (Jimoh, 2012). These are generally independent organization with separate objectives and goals, operating procedures and management styles (Chen and Wu 2010, Lædreand Haugen2006). Therefore, a critical mass of these stakeholders will be needed to develop methods collaboratively to share the risks, costs, and rewards of more efficient projects and processes (The National Academies ofSciences 2009). As David *et.al* (2009) posits, the greater the integration between project members the more likely a project is in achieving a successful outcome.

Each project is unique with its own characteristics and requirements (Oyedele 2013), and the fundamental objectives are to deliver construction projects to the required quality more quickly and improve project performance. Unfortunately, practice is not that simple as construction work has become more complex technically and administratively, and there are several challenging engineering and management problems which occurs (Jimoh 2012).

2.2 Nigerian Construction Industry

The output of the industry in Nigeria accounts for over 70% of GDP (Okeola 2009). However, despite its impressive performanceOyedele (2013)emphasized, that the Nigerian Construction industry faces a significant number of challenges; including the lack of local skilled labor, power shortage, the unavailability of materials, and the unethical practices.

2.3 Procurement

Procurement is about the acquisition of project resources for the realization of a constructed facility (Walker and Rowlinson 2008). Procurement in the context of property development is the activity by which a housing association obtains its buildings and properties taking account of price, quality, time and sustainability to deliver overall best value (Adenuga and Dosumu 2012).

According to David *et.al* (2009), procurement system involves features such as culture, leadership, management, economics, environmental, ethical and political issues and contract strategy. Ojo and Aina (2010) see the decision to select the appropriate procurement option to implement a construction project as crucial, stressing further that, though it does not necessary lead to a successful project but with other factors taken into consideration can influence the success of the project.

According to Zhyzhneuski (2014), Construction industry is a very conservative type of industry with well-known traditional approaches to business, including procurement processes. In a response to reduce the incidence of time and costs overruns, the disputes that may often arise from the traditional method of procurement and the likelihood of project success, alternative forms of procurement method such as partnering have been advocated (David *et.al* 2009).

Poor performance of construction projects in Nigeria has been attributed to the wrong procurement selection decisions and continuous use of the traditional framework notably in the public sector (Oyedele, 2013). According to Ogunsanmi (2012),Variants of the

procurement methods in use in construction projects in Nigeria include Traditional, Design and Build, Project Management, Construction management, Management Contracting, Labor-Only, Direct-Labor, and other Discretionary procurements such as Alliancing, Partnering, and Joint Ventures.

2.3.1 Procurement methods

The expectation of the Stakeholders in the Nigerian Construction Industry that performance in construction project will be obtained naturally with the enactment of Public Procurement Act (PPA) 2007 fell short because the act is plagued with numerous institutional inefficiencies notably typecasting single procurement strategy for every project circumstances (Ekung*et.al* 2013). Ojo and Aina (2010) also cited that in Nigeria, clients and consultants do not have a specific procedure in choosing their procurement method to implement projects but base it on familiarity with a particular method. Hence, clients use procurement methods compatible with their corporate environments. Ogunsanmi (2012) also sees the design process utilized by the procurement method as a critical suspect to issue of claim generation. However,Mbamali and Okotie (2012) stated that, what is of fundamental importance may not be the mode of delivery adopted but the integrity, managerial and professional competence of the executors.

Other procurement methods that aim at better integration and overall project success have also evolved in the country. Such other methods include, management contracting, construction management, partnering and design and build (Mbamali and Okotie 2012).Ojo and Aina(2010), see this strategic change in procurement practices and procedure as inevitable in the Nigerian construction industry. However, Ekung*et.al* (2013) opined that, the various procurement systems used can be categorized into two

broad categories as traditional methods and Management methods. The two categories are discussed in turn below.

2.3.1.1 *Traditional Procurement Method*

According to Mbamali and Okotie (2012), Walker and Rowlinson (2008), the traditional approach in the construction sector is to handle building design and construction in two separate phases and by two separate teams; the design and construction teams. Traditional procurement is a method of acquiring new units of housing in which a client selects an Architect and other consultants for the design of the project and later a building contractor is also selected, who has contractual relationship with the client and executes the project to completion (Ogunsanmi 2012). Walker and Rowlinson (2008) opined that, the traditional approach remains mainly because most contractors and clients are familiar with it and so it often becomes a default approach.

There are various forms of traditional methods of procurements as discussed by Oyedele (2013) as outlined below;

Direct-Labor Method of construction: The client engages the tradesmen to fix the construction without a coordinating contractor (the client designs his building and call different tradesmen, the client however, takes all the risks and manages the cash-flow).

Traditional method of the Design, Bid and Build:The client designs his property and call for different contractors who will compete among each other especially in the area of cost to win the bid (Open Tendering).

Selective Tendering method: Another method of traditional method which involves inviting some qualified contractors who bid for works (qualifications may be in terms of

turnover, number of employees, annual profit, previous experience or a combination of these).

A newer fashion of the traditional method is a system whereby clients have their own bill of quantities (BOQ) on the property which is used to compare the bid of the contractors. Any contractor that bids 10% lower or 10% more than the reserved price (the contract sum in the client's BOQ) will be disqualified (Oyedele, 2013).

This method of procurement (traditional method) has posed a lot of challenges and disadvantages to all the parties and actors involved in the construction process. This is ascertained by various researchers and scholars of the building construction management (Walker and Rowlinson 2008,Mbamali and Okotie 2012,Ogunsanmi 2012, Oyedele 2013, Ekung*et.al* 2013, Awodele 2014).

In the traditional "confrontational contracts", both parties look forward to have their contractual entitlement and protect their contractual rights. As a result of that confrontation, sometimes it is possible to add significant cost to and delay the project without giving any value (Samaraweera 2013). This approach offers the lowest chance for integration of construction experience into design, resulting to the delay of project execution and high level of difference between the designed and constructed products (Mbamali and Okotie 2012). Walker and Rowlinson (2008) also said that the main criticism about the traditional approach has been that it invites a confrontational approach over disputes arising out of contract variations, stressing further that, it imposes role-rigidity upon all parties. Relationship aspects are impaired under the traditional procurement system because the contractor is answerable to the principal design

consultant with no formal direct access to the client to suggest improved design for constructability.

Traditional procurement has been a long age procurement method that has demonstrated high risk of untimely completion of projects as confirmed by many studies and usually results in time overruns (Ogunsanmi 2012). It removes the contractor from the design development phase and thus much management and constructability information and knowledge is lost, with serious cost and relationship risk consequences (Walker and Rowlinson 2008).

Criticizing the traditional methods, Oyedele (2013), stated that such methods are slow, innovation is often stifled, there is little, if any, opportunity for contractor input into design and construction methods, and quality is often an issue of dispute. Cost variation due to change in design during construction is rampant with the methods leading to disagreements and litigations. Oyedele (2013) further stated that these problems and many more led to the developments of modern methods of procurements.

2.3.1.2 Modern Procurement Method

According to Walker and Rowlinson (2008), with the advent of more experienced and sophisticated clients, there has been an opportunity for leading contractors of the industry to explore new routes and there has been an increased recognition that, the conventional (traditional) approach to procurement is inadequate due to increase in the technical complexity of buildings and clients managerially sophisticated. Oyedele (2013) cited that, modern methods of construction are the innovative Public Finance Initiatives (PFIs) that are used for construction project delivery. They involve public and private finance

arrangements which result in mutual benefits.Early contractor involvement in the design development process can be facilitated using non-traditional procurement methods that allow contractor expertise to be made readily available to the design team (Walker and Rowlinson2008).

The modern view of the procurement system is one predicated on issues of trust, collaboration and ethical behaviour, rather than the traditional view of structure and legal frameworks. This paradigm shift in how procurement is viewed has laid the foundation for an alternate, client and stakeholder-focused approach. A more recent development in the construction industry has emerged for a number of sophisticated(i.e. construction-procurement-experienced) clients where they have experimented with relational-based procurement approaches (Walker and Rowlinson2008).

According to Davis et.al,(2008)**,** several variants of management procurement forms exist, which include; management contracting, construction management and design and manage. There are some subtle differences between these procurement methods;

1. In the case of management contracting, the contractor has direct contractual links with all the works contractors and is responsible forall the construction work.
2. In construction management, a contractor is paid a fee toprofessionally manage, develop a program and coordinate the design and constructionactivities, and to facilitate collaboration to improve the project's constructability.
3. A design and manage strategy is similar to management contracting. Under a design and manage contract, the contractor is paid a fee and assumes responsibility, not only for works contractors, but also for the design team.

As Zhyzhneuski (2014) cited regarding procurement in construction, better understanding and wider implementation of new strategies emerged in addition to the traditional procurement strategies. Such new additional strategies developed and widely implemented includes,

1. Design and build procurement.
2. Management procurement (management contracting, construction management).

However,Zhyzhneuski (2014) noted that, new realities of business environment such as a growing number of new technologies and their complexity, higher level of competition, more open markets, better opportunities for collaboration, steady financial problems, especially with public budgets, led construction stakeholders to further development of new approaches for procurement. Consequently, these new strategies developed include; Prime contracting, Partnering, Alliancingand Joint ventures.

According to Awodele(2014), a joint venture company is set up in which a majority of that company is owned by the private sector partner. The public sector selects a strategic partner through a competitive process that includes a bid to carry out the first phaseof work. Subsequent phases arecommissioned by the public sector partner, but carried out by the strategic partner,using the first phase of work as a benchmark to determine the appropriate futurecosts.

2.4 Partnering

A long-term commitment between two or more organizations is important for achieving specific business objectives by maximizing the resources of each participant. Consequently, it is necessary to replace traditional relationships with a shared culture without regard to organizational boundaries. Such relationship is based on trust,

dedication to common goals, and an understanding of individual expectations and values (Chen and Wu 2010, Bygballe*et.al* 2010). Al-Amoudi (2011) stated that partnering concept is relatively a new approach which requires companies to change their old traditional relationships and replace it with the idea of sharing, trust, transparence, and commitment to reach the determined mutual target. It represents a fundamental shift from the traditional adversarial relationships in construction as opined by Bygballe*et.al* (2010).

Effective implementation of contracts that require the use of innovative technologies or practices or the training of workers will require that owners work closely and collaboratively with their contractors to allocate the risks, costs, and benefits of innovation appropriately (The National Academies of Sciences 2009). This collaborative approach is now in use around the world under a variety of names such as alliancing, partnering, strategic alliances and relational contracting framework arrangement (Samaraweera 2013).

Partnering has been increasingly used as a procurement method (Adnan *et.al* 2011). It has been implemented by putting a partnering agreement on top of the traditional contract and encouraging contractor, consultant and client to proactively address project risks, by jointly identifying and managing such risk before any effect on the project. The problem with this approach is that superintendents have continued to see their role as gatekeepers rather than as team members and contractors have kept one eye on the conditions of contract and claims, whilst going through the partnering process(Walker and Rowlinson 2008).

For any given project, a client can adopt a collaborative strategy such as partnering irrespective of the procurement method used. Such a strategy has been often used by clients who have series of projects to undertake (David *et.al*,2001). Several researchers have noted that, even if integration is costly and takes time to become beneficial, partnering is still possible because many projects last for several years and/or include repetitive processes (Bygballe*et.al* 2010). Al-Amoudi (2011), said the most important thing to make partnering effective and successful is to start it in early stage of projects.

According to Brett (2000), for those that have had problems with construction projects, including delays, litigation, cost overruns and excessive change orders, the partnering approach may seem like a theory that cannot withstand the reality of the job site. The skepticism towards partnering may relate to how partnering is presented with regard to who should be involved and how their opinions will be taken into account(Bygballe*et.al* 2010).

2.4.1 Concept and Definition of Partnering

According to Carr *et.al* (2010), Partnering in the construction industry has its roots in the 1980s, when the Total Quality Management (TQM) movement was changing the nature of conducting business in the United States and the legal and business communities were concerned about the rapid rise of unresolved claims and litigation in commercial construction cases. At this time, new strategies were being examined to change the traditional adversarial environment that plagued the construction community. Stating also that, the business and legal communities were experiencing the destructive impact of the rising numbers and economic costs associated with litigation and were experimenting with alternative dispute resolution methods such as mediation and mini-trials.Al-Amoudi

(2011) opined that the first introduction of the idea of partnering was by the U.S. Army Corps of Engineers in the late of 1980.

There are a lot of definitions of partnering, it is a multifaceted concept and a general definition is problematic (NystrÖm 2005, Adnan *et.al* 2011, Al-Amoudi 2011). Construction partnering is a commitment between the owner, consulting engineer, and the contractor(s) to improve communications and avoid disputes by working together towards shared and common goals and objectives on a project specific basis (Allan-Lowe, 2014). Partnering is advocated as a project specific, communicative alternative to the traditional legal coordination process of the construction industry (Gottlieb and Jensen, 2011). According to Bygballe*et.al* (2010), much of the partnering literature refers to partnering as a formal contract or agreement between two or more parties that depicts the responsibilities of each partner. However, all partnering definitions are based on the relationship of a win-win attitude as stated by Al-Amoudi (2011), Najimu (2012) and Samaraweera (2013).

According to Bygballe*et.al* 2010, the frequently cited definition of Construction Industry Institute's (CII, 1991) definition of partnering is;

> *''A long-term commitmentby two or more organizationsfor the purpose of achieving specific business objectivesby maximizing the effectiveness of each participant's resources. This requires changing traditional relationships to a shared culture without regard to organization boundaries. The relationship is based upon trust, dedication to common goals, and an understanding of each other's individual expectations and values. Expected benefits include improved efficiency and cost-effectiveness, increased opportunity for innovation, and the continuous improvement of quality products and services.''*

According to Najimu (2012), Partnering can be defined by

1. Its attributes (such as trust, shared vision and long term commitments) and
2. The process (including developing a mission statement, agreeing on goals, organizing and conducting workshops).

In general, partnering can be defined as a strategic commitment between companies or firms in order to develop their performance in a mutual project (Al-Amoudi 2011). Samaraweera (2013) criticized that partnering is not a solution for all contractual problems and prior to making a decision to choose a partnering relationship the suitability to the proposed project has to be examined. While partnering may not resolve all the problems encountered in the construction process, however, it does create a framework for conflict resolution, improved communications, reduced litigation and cost containment on potential overrun (Brett, 2000). Ekung*et.al* (2013) also emphasized that partnering stand unequivocally unchallenged in terms of cost and time certainty, better risk allocation, flexibility, quality design and construction.

Adnan *et.al*,(2011), emphasized also that the implementation of partnering will enhance the decision making process and ideas obtained from different people can be gathered and discussed thoroughly to come to the most appropriate decision for any situation. Hence, it is hoped that more creative thinkers will emerge from this process. Brett (2000) also sees the investment in partnering as worthwhile when comparing it to the potential of increased costs and delays when the partnering process is not used. In fact, it has even been described as the most significant development to date as a means of improving project performance (Bygballe*et.al* 2010) and remains most suitable for the realization of integrated project objectives (Ekung*et.al* 2013).

2.4.2 Categories of partnering

According to Al-Amoudi (2011), normally, partnering is divided into two categories:

Long-term partnering: it is an arrangement between the owner and only one partner for a determined period to do works maybe for several projects. It also called (strategic alliancing).

Project-specific partnering: It is an arrangement between the owner and several partners for a determined period to do works of usually only one single project but could be more than one project.

According to Najimu(2012) and Ekung*et.al*(2013) also, Partnering may be:

1. Short-term and project orientated (emphasis is more likely to be on agreeing on project governance issues to secure immediate project benefits rather than on developing advanced cooperative practices) or
2. long-term and strategic (concerned with optimizing the partnership‘s resources through closer collaboration to maximize long-term benefits) in nature. Bygballe*et.al* (2010) also distinguished between project and strategic partnering; where the former refers to a specific project and focuses on short-term benefits and the latter represents a more long-term commitment between partners across several projects.

2.4.3 Components of partnering

In a partnering arrangement, the fundamental components are formalized mutual objectives, agreed problem resolution methods and an active search for continuous measurable improvements. These fundamental components are lacking in other arrangements and therefore they may not be able to support a partnering relationship

(Adnan *et.al* 2011). As seen by (Nyström 2005), trust and common goals is the most important components in partnering. Stressing further, other commonly mentioned components are economic incentive contracts, relationship building activities, continuous and structured meetings, and facilitators choosing working partners, predetermined dispute resolution method and openness.

Five key elements of successful partnering according to Al-Amoudi (2010) are;

1. The need for trust
2. The right personalities.
3. Openness in communication
4. Organizational culture and organizational learning
5. Team-building and the role of management.

According to Nyström (2005), a partnering project always includes trust and common goals, with some additional components of choice and is shown in figure 2.1.

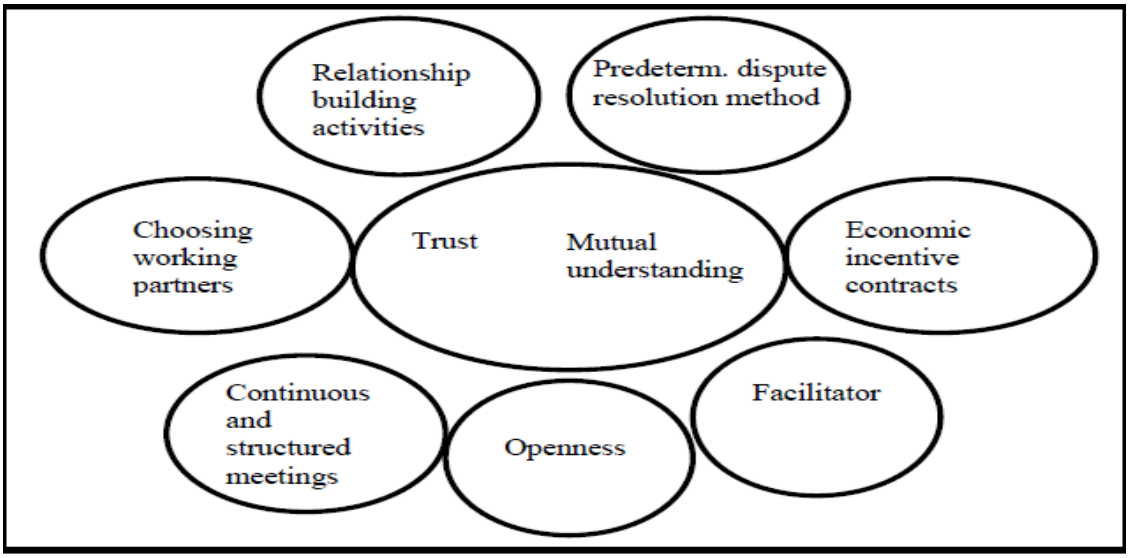


Figure 2.1 Partnering flower*(Source: Nyström, 2005)*

2.4.4 Stakeholders of partnering

Construction projects involve a diverse set of stakeholders; owners, users, designers (architects, engineers, and interior designers), general contractors, subcontractors, skilled trade people, manual laborers, suppliers, manufacturers, and operators, as well as regulators, financing institutions, legal representatives, insurance and bonding companies, and others. Each of these groups come to a project from a different discipline and has its own objectives as it participates in the project (The National Academies of Sciences2009). A stakeholder is defined as any person or entity interested in the outcome of the partnership and there are many stakeholders associated with each partnership (Partnering 101 a Guide to the Basics of Partnering with ADOT, 2014).

A construction project consists of a network of different actors and their respective resources and activities. Partnering relationships will influence and be influenced by the various actors due to the interdependencies that exist in such projects (Bygballe*et.al* 2010). Noteworthy, the procurement method that is chosen for a given project will influence the degree of integration that occurs between project team members, as this will depend upon the point in time when the contractor is appointed in the procurement process (Ekung*et.al* 2013). To increase productivity and efficiency in the construction industry, a strong focus has been set on better integration of the different parties (including the client, architects, engineers, general contractors, subcontractors, suppliers, etc.) in one integrated project organization (Al-Amoudi 2011).

The primary stakeholders, or those directly impacted by the terms of the contract and the outcome of the project, must be identified early on to determine who needs to take part in the partnering process and at what level. These may include, among others, the design

firms, subcontractors, suppliers, public utilities and the end user of the project (Carr *et.al*,1999). According to Bygballe*et.al*,(2010), there is no unified view as to what partnering relationships are in construction industry.

Every construction project is initiated by an owner, which may be a government entity, a corporation, or an individual (The National Academies of Sciences, 2009). In a partnering program wherein participation by other stakeholders is voluntary, the organization that promotes partnering needs to present a clear portrait of partnering to encourage other stakeholder's participation (Carr *et.al* 1999). However, as (Partnering 101 a Guide to the Basics of Partnering with ADOT, 2014) cited, all stakeholders are not partnership members and a partnership member is a stakeholder (such as the client, contractor consultant etc.) who is actively involved in the partnership.

Their duties include:

1. Active participation
2. Coordination with other members and stakeholders
3. Following the charter and principles of the partnership
4. Resolving issues according to issue resolution agreements
5. Completing evaluations
6. Seeking to improve the relationship

2.4.5 Processes and stages in partnering

According to Carr *et.al*,(1999), the partnering process begins after two or more organizations reach an agreement or sign a contract to work together on a project. The best time to initiate the partnering process is immediately after the award is made; however, partnering can be initiated at any time during the project. The benefit to an

early start in partnering is to create a set of expectations that instill good communications, teamwork and collaborative problem solving from the start of the relationship. Partnering exists to attain and reach a specific goal and target by following a determined procedure (Al-Amoudi 2011). As soon as two or more organizations agree to work together under a contract on a project or program, the partnering process should start by holding a kick-off workshop. When partnering is delayed too often the parties engage in old adversarial tactics and partnering intervention becomes a more difficult undertaking (Carr *et.al*,1999).

According to Al-Amoudi (2011), the procedure of establishing a partnering relationship can be condensed into consequence steps; specification of management commitment, joint partnering workshop, development of partner charter, planning for ongoing partnering relationship, and implementationof partnering and solve any problems that may be encountered.

2.4.6 Partnering tools

According Al-Amoudi (2011), there are two important partnering tools that are useful when adopting partnering. First tool is the partnering charter (which used to reduce disputes), while the Second tool is the workshop (used to monitor the implementation the charter). During the partnering workshop, a project charter is developed (value engineering mechanisms are designed, conflict resolution procedures are created and potential problems are discussed prior to construction beginning on the site) Brett (2000). The Charter is a written document drafted by the stakeholders at the kick-off workshop. This Charter creates a visual reminder of their mutual commitment to the partnering vision and how they wish to work together during the project. It is usually a one-page

document signed by all participants at the workshop and often displays the key stakeholder organizations' logos (Carr *et.al* 1999).Adnan *et.al* (2011) stated that the gathering of information in the partnering workshops includes skills, comments, ideas, data, facts and knowledge and at the kick-off workshop. The meeting is most effective when the facilitator has an understanding of both the partnering concept and the organization's business.

Confidence and commitment in partnering may be further augmented by knowledge sharing and enhancing seminars and workshops (Adnan *et.al* 2011). Also, the written partnering charter neither eliminates nor adds more obligations to ones that had been mentioned in the contract. Therefore, the partnering charter states mutual and common goals of the parties and to reduce time-consuming and cost that might be paid in case of disputes. The written charter contains elements such as commitment to team work, standards of quality, budgetary goals, and problem-solving techniques.

However, there is no rigid form to write it but it should be written as per project needs. Signing the charter does not add any risks to the construction officer by any means and it never changes the terms of the signed contract. From financial point of view also, establishing the partnering workshop is not expensive at all. Any party can pay the cost of the workshop, but usually all parties share the cost equally (Al-Amoudi 2011). A corporation or government entity that wants to establish a partnering program should conduct training within the organization at the start of the program (Carr *et.al*,1999). The performance of both contractors and consultants can be monitored using pre-defined

indicators for each of the projects they are involved with and then compared(Ekung*et.al.*, 2013).

2.4.7 Principles of partnering

Brett (2000) sees commitment, communication and, conflict resolution as the three core principles which undergirds the partnering relationship.The fundamental principles of partnering namely trust, commitment, respect, communication, and equality, include appropriate consideration of the interests of all parties at every level was cited by Chen and Wu (2010). Principles of mutual trust, respect, commitment, cooperation, open communication and excellence for all stakeholders towards facilitating greater collaboration to the achievement of project objectives was opined by Najimu (2012).

2.5 Applications of Construction Partnering

According to Samaraweera (2013), partnering is suitable for large public sector projects and more complex project where the risks cannot be fully identified or measured properly. In Nigeria, the adoption of this relatively new procurement technique other than traditional system is to encourage the private sectors to actively participate in the financing, construction, management and operation of infrastructure services and facilities in the country (Awodele, 2014).

2.6 Benefits of Construction Partnering

The expected benefits include improved efficiency and cost-effectiveness, increase innovation opportunities, and the continuous improvement of quality products and

services (Chen and Wu, 2010).Adnan *et.al*,(2011) also sees knowledge sharing, technical sharing, profit and losses sharing, efficient management, higher decision making skills, transfer of ideas from different thinking as the key benefits of the partnering concept.

Al-Amoudi (2011) stated that the main goal of partnering is to develop efficient and skills of the teamwork. The main objective of the partnering process is to achieve a project completion to both parties satisfaction (Samaraweera, 2013). As Najimu (2010) also revealed, the (CII, 1991) additionally posits the benefits of partnering as; opportunity for participants to develop a working atmosphere conducive for innovation, teamwork, trust and commitment.

Partnering will improve performance in terms of quality, cost and duration within the construction industry (Nyström, 2005).Partnering stand unequivocally unchallenged in terms of cost and time certainty, better risk allocation, flexibility, quality design and construction (Ekung*et.al,* 2013). In sum, partnering aims at empowering problem solving at the lowest possible level and earliest possible time and over the shortest possible period (Adnan *et.al*,2011).

According to Samaraweera (2013), there are potential benefits to the client and to the contractor of successful partnering process; benefits to the client can be identified as better value for money, quality, less confrontation and speedy delivery, less risk, greater certainty of satisfaction, and fewer claims, less bureaucracy, better communication, understanding and tolerance of problems, faster construction and continuous improvement. For the contractor,benefits can be identified as; increased profit potential, less confrontation, greater certainty of workload, better communication and

understanding from clients, less bureaucracy, more involvement in key decision making, no competitive tendering process, therefore reduce overheads and reliable flow of design information.

According to Awodele (2014), the adoption of partnering in the Nigerian construction industry will establish a long-term relationship which will foster an organizational environment where trust, increased open communications and employee involvement in construction project will lower the risk of cost overruns and delays as a result of better time and cost control over the project. Stressing further also, it will increase the opportunity for innovation, especially in the development of value engineering changes and constructability improvement.

2.7 Challenges of Partnering

Najimu (2012) highlighted some partnering challenges which include; partner selection communication gap, informal arrangement, trust, risk and reward sharing, commitment, conflict of interest and legal framework. As observed in the study carried out by Lædre and Haugen (2006), most of the highly rated challengesinclude; communication gap, informal arrangement, trust, risk and reward sharing, commitment, conflict of interest and legal framework.

2.8 Variant of Partnering

Nyström (2005), concluded that there are two necessary components in partnering - trust and mutual understanding and that a number of different components can be added to form a specific variant of partnering. Based on this,Awodele (2012) cited that procurement strategies such as Alliancing,Prime Contracting, Joint Venture and Public

Private Partnership (PPP)/Private FinanceInitiative (PFI) (although they do not have the same legal connotations) are allcontracting relationships that are based on partnering principles that are currently beingused in one form or another worldwide. Gottlieb and Jensen (2011), posits that new management idea at large, whether BIM, partnering, lean, Business Process Reengineering (BPR), etc. are solutions looking for or indeed defining a problem.

2.8.1 Public-Private Partnership (PPP)

A procurement delivery model under which the project owner selects a private sector partner to finance, design and construct the project works, and assume responsibility for operations and/or maintenance over a long-term period (Oyedele 2013, Casey and Bamford 2014).Oyedele (2013) also defined Public-Private Partnership (PPP) as a contract between the public sector and a private party in the development of infrastructure. Stating further, the PPP is a mutually beneficial arrangement between the government and the development partner. The government provides the base for the execution of the development, while the development partner contributes financial or technical or management inputs or two or all of the above. Emphasizing that transparency is the watch-word and all stakeholders must have awareness of the working conditions of the system.The definition of PPP may differ slightly between different jurisdictions depending on which part of the arrangement the importance is centered on as stated by Cheung *et.al*,(2010). Stating also that, in general PPPs can be any agreement where the public and private sectors work together to deliver a public project.

Awodele (2012) cited that PPP applications in Nigeria are becoming increasingly popular for both new and old facilities and the most commonly used approach to PPPs in Nigeria

is Joint Venture (JV) and BOT approaches. Stressing that, the Nigerian government introduced the Infrastructure Concession and Regulatory Commission (ICRC) Act 2005 called (ICRC Act) In order to establish a proper legal and regulatory environment to attract private sector involvement and also to provide further guidance.

The ICRC Act establishes the ICRC Commission, which was inaugurated in 2008. For PPP projects, major principles include: Value for money (VFM), Transparency, Fairness, Efficiency, and Accountability and Governance.

As Awodele (2012) stated, in Nigeria, the National Policy on PPPs (NPPPP, 2009) prescribes three main features of PPPs to include the following:

1. The contractual arrangement between the public and private sector in PPP combines the design, construction, or rehabilitation of public infrastructure with its maintenance, and sometimes with the delivery of the service directly to the private contractor.
2. The contract requirements in PPPs are defined as outputs and service standards to be met, rather than inputs (contractors are given freedom to propose their own designs and construction methods).
3. Payments to the private contractor (or revenues from user charges in the case of concession) are linked to meeting specific performance standards. Stating further, these features of PPP, according to the NPPPP, can also be found in a performance based contract or in a full service concession, where the contractor will be repaid by user charges in accordance with other BOT contract models.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Detailed explanation on the research methodology, population of the respondents, samplesizing and techniques employed, data collection, and the statistical methods used in the analyses of the collected data of the study were discussed in this chapter.

3.2 Research Design

Both primary and secondary source ofdata collection were employedin this research work. Primary data was obtained from the questionnaires administered to the construction stakeholders while the Secondary data was obtained from books, journals, magazines, seminar papers and the internet. Documents and theories regarding partnering in construction industry were examined.Structured questionnaires were administered to collect data from clients, contractors and consultants who are the major stakeholders in the construction industry. Inferences and descriptive representation of the analyzeddata was also done.

3.3 Population of the study

According to (Allan-Lowe, 2014) the major stakeholders in the construction industry are the client, contractors and consultants and for this research, the targeted population is the consultants, contractors and the clients in Abuja, Nigeria. The population size for both the consultants and contractors were established from the number of registered consulting and contracting firms in Abuja, registered by the Federal Inland Revenue Service of Nigeria. 245 and 814 were the registered number established for both the consulting and contracting firms respectively.

3.4 Sampling Technique and Sample Sizing

3.4.1 Sampling Technique

According to Mathers*et.al,* (2009), sampling is aimed to achieve a degree of acceptable accuracy as no survey can produce a result that is precisely correct and a margin of error is likely to be formed around any figure produced.Simple Random technique was employed for this survey and the rationale for adopting the random method was because of its feasibility and the need to ensure fair representation of the population as well as increase precision (Okae-Adow, 2013)

3.4.2 Sample Sizing

Mathers*et.al,* (2009) stated that, to obtain a random (or probability) sample, the first step is to define the population from which it is to be drawn. Therefore for this research, 245 and 814 (FIRS, 2014) are the established population size for both the contractors and consultants respectively in the study area and the Kish formula for calculating sample size a finite population was adopted. While the formula adopted by Israel (1992) for a sample size of an infinite population was used for the clients as there is no established data for number of clients.

3.4.2.1 Sample Sizing for the Contractors and Consultants (finite population)

According to Agbodjah (2008), Kish formula for a finite population is defined by:

$$n = \frac{M}{1+\frac{M}{N}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{(eq.1)}$$

Where n = Sample Size, N = Total population

$$M = \frac{\delta^2}{V^2} \quad \text{.....(eq.2)}$$

$$\delta^2 = \text{P x } (1 - \text{P}) \quad \text{..... (eq. 3)}$$

Where V is the standard error of the sampling distribution and

δ is the maximum standard deviation of the population element

P is the proportion of population elements belonging to the defined class.

3.4.2.1.1 Sample Size for the Contractors

Using a total error of 0.1 at 95% confidence interval,

V is 0.05 and P is 0.3; M = 84, N= 62.5≈ 63

Mathers*et, al.*, (2009), stated that the allowance for the expected non-response to the survey should be noted and added to the initial sample size.

Adding 10% of 63 for non-responsiveness

N= 63 X 1.1 = 69.3≈ 69

Therefore sixty-nine (69) was established as the sample size of the contractors for the survey.

3.4.2.1.2 Sample Size for the Consultants

Using a total error of 0.1 at 95% confidence interval,

V is 0.05 and P is 0.3;

M = 84 N = 76.2≈ 76

Adding 10% of 76 for non-responsiveness

N= 76 X 1.1 = 83.6≈ 84

Therefore eighty-four (84) was established as the sample size of the consultants for the survey.

3.4.2.2 Sample Sizefor the clients (infinite population)

Israel (1992,) defined Equation 4 by:

$n = z^2pq/d^2$ ..... (eq. 4)

Where *n* is the sample size,

Z^2 is the abscissa of the normal curve that cuts off an area α at the tails (1-α equals the desired confidence level, e.g., 95%),

d is the desired level of precision,

P is the estimated proportion of an attribute that is present in the population,

*q*is 1-P.

The value for Z is found in statistical tables which contain the area under the normal curve.

Using 90% confidence level, α=0.10 and critical value of $Z\alpha/_2 = 1.64$

P is 0.3, $n = 56.48 \approx 57$

Adding 10% for non-responsiveness, the established sample size for the client was 63.

3.5 Data Collection Instruments

According to Mathers*et.al,* (2009), there isa wide range of methods available for collecting data and the selection of the appropriate method depends upon a number of factors, including:

1. access to potential respondents
2. the literacy level of respondents
3. the subject matter
4. the motivation of the respondents

5. resources

Secondary data was collected from relevant literature review of textbooks, journals, reports, internet while Primary data were collected using a structured questionnaire.Kolko (2012) noted that the use of questionnaire in a survey could enhance better understanding of the population through small sample, more data would be gathered within a short period of time and statistical evidence to prove the survey findings to a sceptical audience could be achieved. Mathers*et, al.* (2009) also noted that questionnaires can be cheaper and quicker if the samples are large and widely dispersed, emphasizingthat it is a convenient way of collecting useful comparable data from a large numberof individuals. Kolko(2012) stated Multiple Choice, Likert Attitude Scale, Dichotomous Scale, Semantic Differentials and Ranking/Rating Scales as types of questionnaire in a survey.As stated by Mathers*et.al,* (2009), Likert scale is one of the most commonly used scales whereby respondents are presented with one or more statements and are asked to score each statement on a multi-point scale. Therefore for this survey,Multiple Choice, Likert Attitude Scaleand Ranking/Rating Scales were adopted.

The questionnaire for this survey has four sections A, B, C and D. Section A was used to determine the firm's profile. Section B was designed and used to determine the firm's awareness and adaptability of partnering as a procurement option. Section C was designed and used to allow respondents rank some benefits of the applicability of partnering in a 5-point likert scale, "5" indicating "Very Relevant" (i.e. 100%) and "1" indicating "Very Irrelevant" i.e. (0%). Section D of the questionnaire was designed and used to also rank the challenges of adopting partnering in the Nigerian Construction

industry in a 5-point Likert scale. 10 factors each of the benefits and challenges of partnering applicability in Nigerian Construction Industry were presented in both sections C and D to be ranked.

3.6 Administration of Data Collection Instruments

The questionnaires were administered tosenior, middleand junior level management of the various contracting and consultancy firms selected. The National Academies of Science(2009) noted that every construction project is initiated by an "owner," which may be a government entity, a corporation, or an individual, therefore on the case of the clients for this research, private, public and corporate clients were considered.

3.7 Methods of Data Analysis

Section A and B of the Questionnaire was analyzed using percentage in the SPSS (Statistical Product for Social Science). Tables and charts wereused to express the result for better understanding. Section C and D were analyzed using the Relative Importance Index (RII) on a "5" point Likert scale.Computation of the mean using the weighted average formula was adopted (Shodhganga, 2014)

Relative Importance Index (RII)

$$X = \frac{\sum fx}{\sum f} \qquad \text{(eq. 1)}$$

Where: X = mean

x = Points on the Likert's scale (1, 2, 3, 4 and 5)

f = frequency of respondents' choice of each point on the scale

1. Computation of the Relative Importance Index (RII) for each item of interest, using the formula:

$$RII = \frac{\sum fx}{\sum f} \times \frac{1}{K} \quad \text{(eq. 2)}$$

Therefore,

$$RII = \frac{X}{K} \quad \text{(eq. 3)}$$

Where k= maximum point on the Likert's scale (in this case, k= 5)

2. Ranking of the items under consideration was based on their RII values. The item with the highest RII value was ranked first, the next second and so on.
3. Interpretation of the RII values was achieved through the following as recommended by Mbamali and Okotie (2012):

RII < 0.60, item is assessed to have low rating

$0.60 \leq RII < 0.80$, item assessed to have high rating.

$RII \geq 0.80$ items assessed to have very high rating.

3.8 Validity and Reliability of the Instrument.

According to Wentzel-Larsen *et.al,* (2011), questionnaires are extensively employed in research and the usefulness as instruments depend on both validity and reliability. Mark (1995) mentioned that, the content and time required to complete the questionnairemay change concentration and enthusiasm throughout the questionnaire. Stating further, validity is the degree to which a survey measures what it sets out to measure while reliability on the other hand refers to the stability of a measurement. Expatiating further,Face validity, Content validity, Criterion validity, and Construct validity are the

four forms validity is being measured. Reliability can also be assessed through test-retest reliability for stability, inter-item reliability for internal consistency and parallel scale for equivalence. However, according Wentzel-Larsen *et.al,* (2011), the use to these measuresis not always possible for reliability due to lack of data or characteristics of the questionnaire.

According to Mark (1995), Content validity usually consists of an organized review of the survey's contents by set of knowledgeable reviewer(s) on the subject matter. While face validity refers to the degree to which a test appears to measure what it sets to measure. According to Wentzel-Larsen *et.al,* (2011), reliability can also be expressed in terms of the standard error of measurement which is an estimate of how often errors of a given size can be expect. However, Mathers*et.al,* (2009), emphasised that sampling is aimed to achieve a degree of acceptable accuracy as no survey can produce a result that is precisely correct and a margin of error is likely to be formed around any figure produced. Errors of measurement that affect reliability are random errors and errors of measurement that affect validity are systematic or constant errors (Mark, 1995).Mathers*et.al,* (2009), stated that the allowance for the expected non-response to the survey should be noted and added to the initial sample size. And as posited by Bartlett *et.al,* (2001), a random sample of 10.20% of non-respondent is recommended for a researcher to use in non-respondent follow-up analyses.

Taking these into consideration, for this research, content and face validity were employed to measure the validity of the questionnaire. It should be noted that, content validity is a subjective and still very qualitative measure as stated by Mark (1995).

Appropriate sampling was also carried out for this research. Standard error of the sampling distribution (V), desired confidence level (of 95%), the desired level of precision (d), addition of certain percentage (10%) for non-responsiveness were all considered in the sampling design. It is important to note that validity and reliability are not an all or none issue but a matter of degree (Mark, 1995).

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS

4.1 Introduction

This chapter deals with the analyses, interpretations and presentations of the data collected and collated from the survey carried out.Simple bar charts, tables, and percentages for better understanding of the responses from the respondents were employed in this chapter.

4.2Analysis of Data Administered

Two different questionnaires were administered for this research work; One for the clients and the other for consultants and contractors. 63 questionnaires were administered to clients in the construction industry, of the returned questionnaire, 33 were found useful (accounting for 52% of the questionnaires administered to the clients).69 questionnaires were administered to contractors and 60 (87%) were returned and found usable. 84 questionnaires were also distributed for consultants and 74 (88%) were returned and found usable and significant for analysis as shown in figure 4.1.

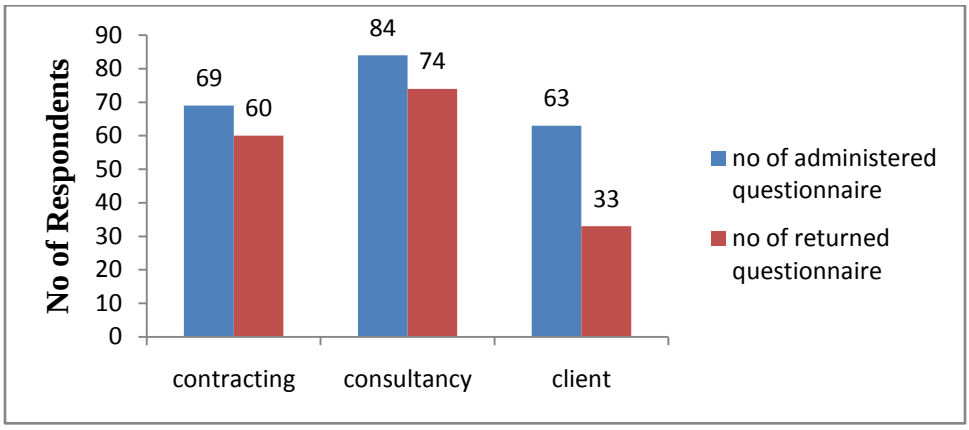


Figure 4.1 Administered Questionnaires. *Source: Field Survey (2015)*

4.3 Organizational Data and Level of Professionalism of Respondents (Client, contractors and consultants)

Figure 4.2 depicts 60.6% for the public, 30.3% for the private and 9.1% for the corporate as the types of client as indicated by the respondents (clients). Both contractors and consultants were also asked to indicate the types of clients handled. As Hong *et.al*,(2010) emphasized that partnering is best when led by the client organization indicatingthat the client is seen as pivotal in bringing partnering into practice. Higher responses were indicated for the public clients for both firms as 61.7 % and 68.9 % were indications made by contracting and consultancy firm respectively. 16.7% and 21.6% were responses for the private clients of the contracting and consultancy firm respectively. Very few responses were indicated for the corporate type of client as 21.7% for contracting and 9.5% is for consultancy as shown in Figure 4.2 above.This result is in conformance with the statement made by Ekung*et.al* (2013),Mbamali and Okotie (2012) that the public sector constitutes the major client of the construction industry in Nigeria.

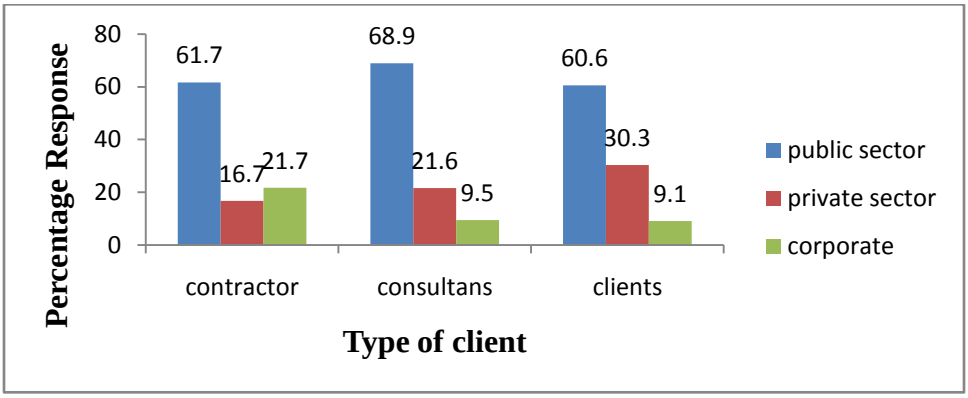


Figure 4.2 Type of clients
Field Survey (2015)

The respondents were requested to indicate their profession. Figure 4.3 shows the percentage responses for various professions as indicated by the respondents. The result

indicated that the larger percentages of the respondents (client) are builders with 30.3% and architects with 27.3%. However, 33.3% respondents account for architects in the contracting firm while 33.8% respondents account for that of the consultancy firm of the same profession. For building profession, higher responses were indicated with 50.0% responses from the contracting firm and 13.5% for consultancy. The structural/civil engineers account for8.3%and 12.2% for the contracting and consultancy firms respectively while the quantity surveyors account for 5.0%and 35.1% for both contracting and consultancy respectively. The service engineers account for few responses for contracting firm with 3.3% and none for consultancy firm. Few responses were indicated for other professions which include the electrical engineers and Mechanical engineers for consultancy firm.

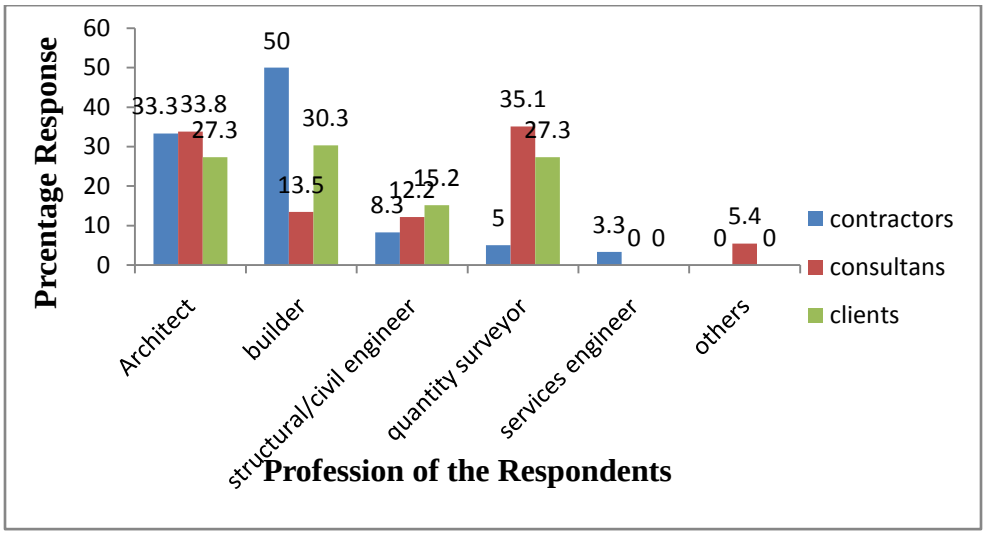


Figure 4.3 Type of Profession
Field Survey (2015)

4.3.1 Academic and Professional Qualifications of the Respondents

For the academic qualifications of the respondents (clients) larger percentage of the clients are master degree holders with a percentage of 46% followed by a percentage of 30% for respondents with bachelor degree.However, for thecontracting and consultancy firm, higher number of percentage responses was indicated for a Bachelor of science/engineering as an academic qualification for both firms and a relatively high number of these respondents have acquired a master degree in their various professions. As depicted in Figure 4.4, the respondents in the contracting firm indicated67% and 60% for a bachelor of science/engineering as an academic qualification in the consultancy firm and for the master degree, 25% and 26% for both contracting and consultancy firms was respectively recorded.

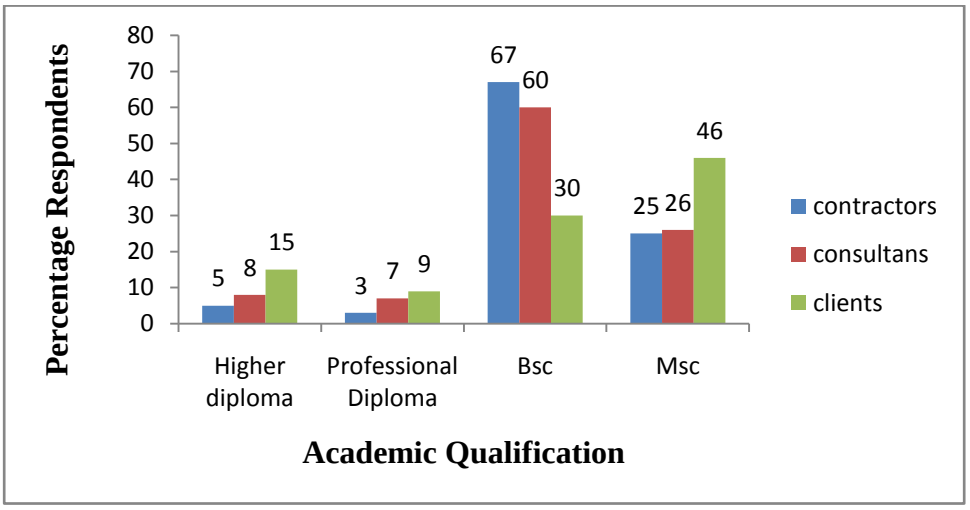


Figure 4.4 Academic Qualifications of the Respondents
Field Survey (2015)

The respondents (clients) belong to various professional bodies with 27.3% belonging to The Nigerian Institute of Architects (NIA), 15.2% to The Nigerian Institute of Building (NIOB),12.1% to The Nigerian Institute of Quantity Surveyor (NIQS) and 30.3% indicated “others” represent respondents belonging to other professional bodies.The

contractors and consultants are also members of various professional associations to further buttress professionalism in the built environment. For the contacting firm, higher number of the respondents in the building and architecture as a profession belong to The Nigerian Institute of Building and Nigerian Institute of Architecture with 41.7% and 33.3%respectively. 3.3% responses each for Nigerian Institute of Quantity surveyors (NIQS) and the Nigerian Society of Engineers (NSE). Also, for the consultancy firm, 13.5% of the respondents indicated NIOB as their professional qualification, 31.1% to NIA, 27.0% to NIQS and 17.6% to NSE. This is as depicted in Figure 4.5.

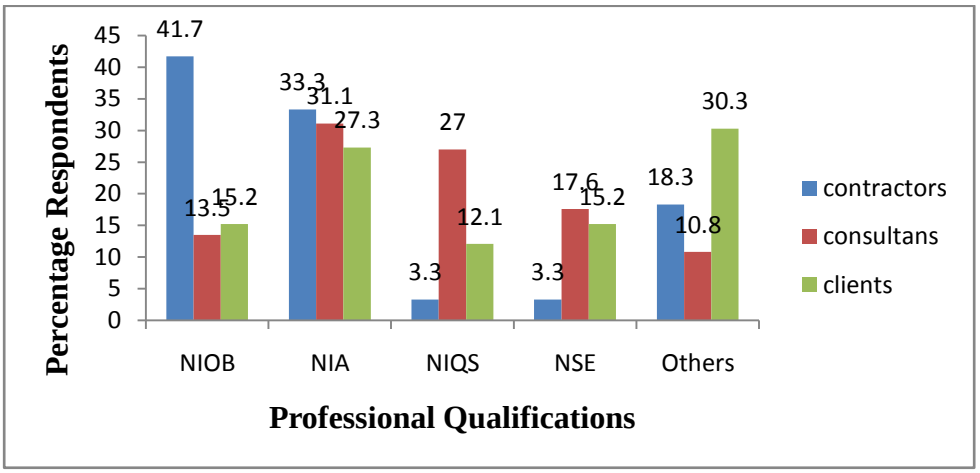


Figure 4.5 Professional Qualifications of the Respondents
Field Survey (2015)

4.3.2 Managerial Level and Years of Professional Experience of the Respondents

According to Al-Amoudi(2011), not all partnering projects are successful, and people who are in managerial level should have a solid background in partnering. Figure 4.6shows the managerial level of the respondents. For the clients, higher number of responses was obtainedfor the middle management level accounting for 57.6% and the next higher ranking management level is the senior management level with 27.3%. For both the contractors and consultants also, the middle to the senior management level was

indicated to be relatively higher than the junior management. From the result, the respondent from the contracting firm, belonging to the senior management level, are 25% and 35.1% for the consultancy firm. For the middle management level which carries the larger percentage of the responses obtained from both firm, indicated 58.3% for contracting firm and 55.4% for consultancy firm was indicated. However, few responses were obtained for members belonging to the junior management level. Such responses were 16.7%for contracting firm and 9.5% for consultancy firm. This shows that therespondents are quite knowledgeable and experienced in the built environment.

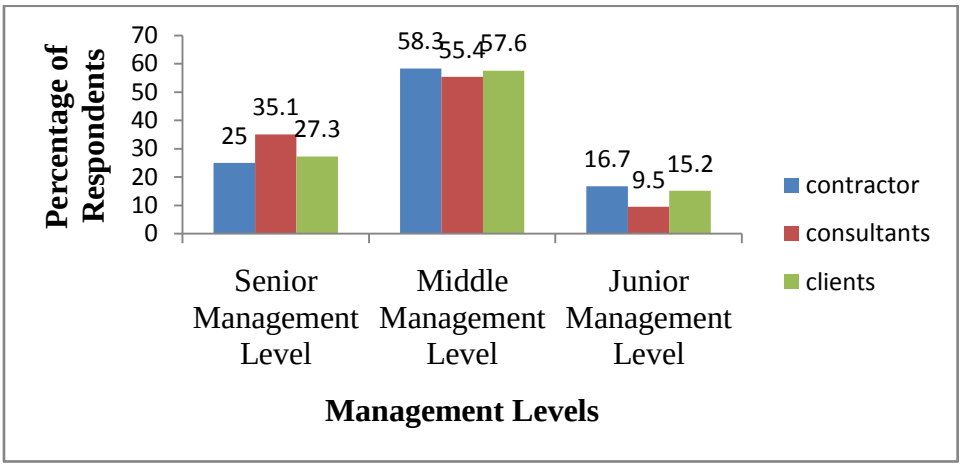


Figure 4.6Managerial Levels of the Respondents
Field Survey (2015)

Years of professional experience were also obtained from the respondents in other to compliment the management job level in determining the respondents' level of professionalism in the built environment. The clients indicated years of professional experiences, with 36.4% indicating 10 to less than 15 years of professional experience, 30.3% indicated 15 years and above as years of professional experience. 12.1% is for 5 to under 10 years of working experience and 21.2% indicated a year to under 5 years of professional experience. Furthermore, the responses obtained indicated that respondents

with professional years of experience between 5 years to above 15 years are higher for the contracting and consultancy firm.Figure 4.7 below showed that for 16.7% and 50 % are percentage responses indicating 10 to less than 15 years of professional experience for the contracting and consultancy firm respectively. 66.7% and 23.0%is for respondents in contracting and consultancy firm respectively for professional years of experience of 15 years and above. The result showed that higher response were obtained for professional years of experience of 10 to under 15 years for consultancy firm than the contracting firm and vise-versa for professional years of experience of 15 years and above.

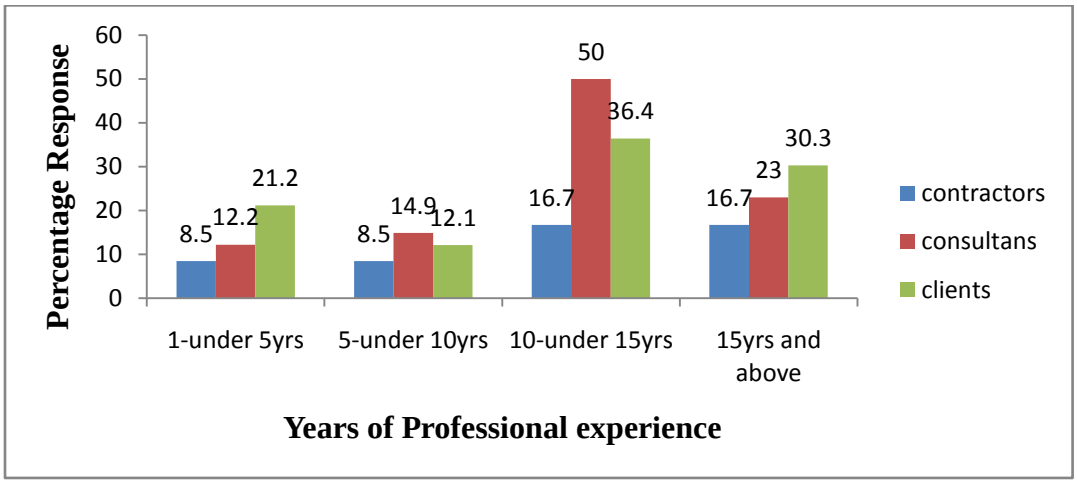


Figure 4.7 Years of Professional experience of the Respondents
Field Survey (2015)

On the number of projects handled, Figure 4.8 indicated higher percentage response for clients with 36.4% to have handled 10 projects and above, followed by respondents who have handled 5 to less than 10 projects with a percentage of 27.3%. However fewer respondents with 12.1% have not handle any project at all. For the contractors and consultants, the figure indicated that for both firms, projects between 1 to under 5 obtained a relatively few response with 10.0% and 16.2% respectively. However, the

result is quite impressive for larger number of projects handled as the respondents from both firms indicated high response to such projects. Projects of between 5 to under 10 got a percentage response of 58.1% and 18.3% for consultancy and contracting firm respectively. Projects of between 10 and above, got higher responses for contracting firm with a percentage of 71.7% and 25.7% is an indication for the consultancy firm.

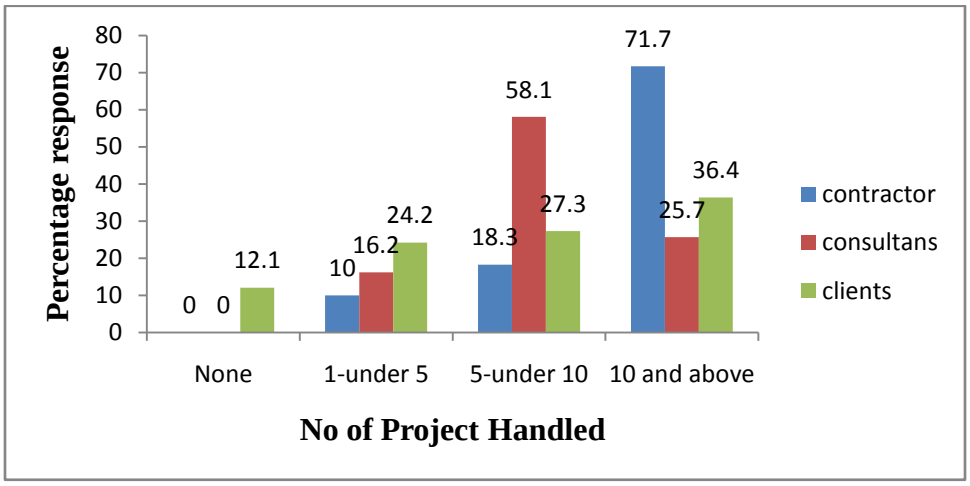


Figure 4.8 Number of Projects handled by the Respondent
Source: Field work (2015)

Further indications were made on the number of employees in the contracting and consultancy firm in other to determine the sizes of the various firms and to further ascertain the level of respondents' (contractors and consultants) professionalism. Miller *et.al*, (1998) noted that it is generally accepted that a firm's operating environment has a significant effect upon external performance and the internal organization. Stressing further that the construction industry's academic arena focuses much of its research on the needs of the larger contractors and there are significant differences between large and small firms, emphasizing that these differences must be understood if the academic arena within construction is to progress. With this suggestion, the researcher classified both the contracting and consultancy firms according to sizes adopting the classification of firms

by Miller *et al.*, (1998) based on the number of employees in the firm as 1 to Under 49 employees for small, 50 to under 250 employees for medium and 250 employees and above for large firm. The respondents indicated 58.3% for contracting and 50.0% for consultancy firm belonging to a medium sized firms, for small firms, 33.3% were indicated for contracting and 40.5% for consultancy firm. Although few responses were indicated for large firms with 8.3% and 9.5 % for contracting and consultancy firm respectively. Abdullah *et.al*., (2011) stated that most economy drive towards industrial development is dependent on the development of small and medium sized firms considering its large numbers and structure which under adequate conditions gives them the flexibility and ability to stand adverse economic situations. Miller *et.al,* (1998) also stated that the entrepreneurial nature of the small firm enables it to take risks, whereas large firms are essentially risk averse. Thwala*et.al*, (2009), also documented that small contractors can perform small projects at different and remote geographical locations that might be unattractive to big firms or too costly using the big firms.

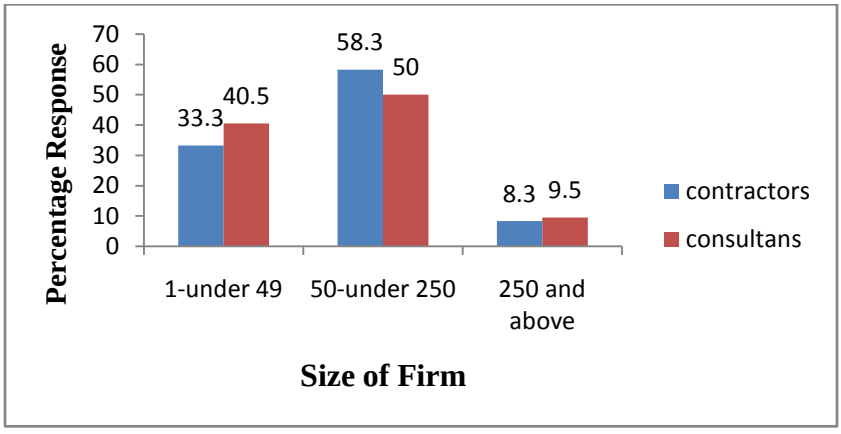


Figure 4.9 Size of firm (Contracting and Consultancy)
Field Survey (2015)

4.4 Level of Awareness and Adoptability of Partnering as a Procurement Method

Figure 4.10shows the level of awareness on partnering as indicated by each respondents. The figure showed that the respondents are very much aware of partnering as an alternative to other procurement methods.The result obtained from the survey indicated that 91.7% was the percentage response for the contractor, 77.0% for the consultants and 90.9% is for the client, on awareness of partnering as an alternative procurement method. This is in line with the statement made by Awodele (2014) that there is huge embrace of partnering as alternative due to perceived failings of traditional system of procuring construction contract which calls for changes.Al-Amoudi (2011), further stressed that awareness of all dimensions in implementing partnering is highly required in order to get best results.

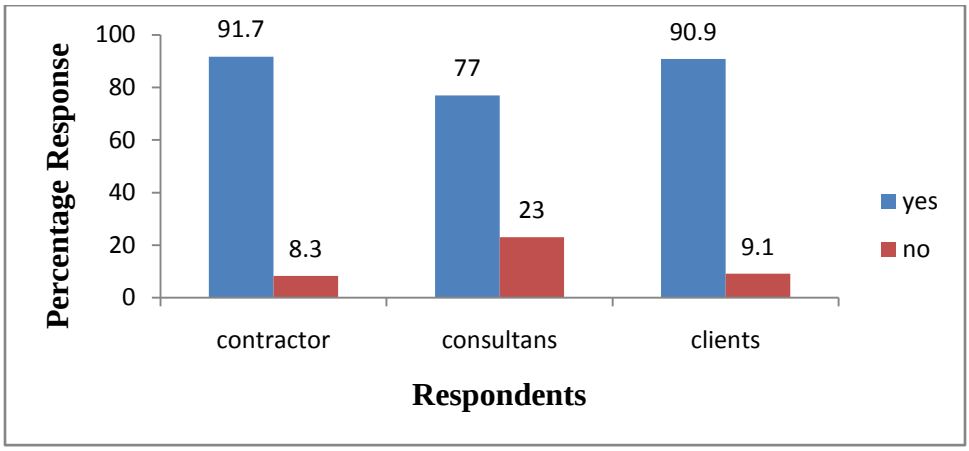


Figure 4.10 Level of Awareness on Partnering.
Field Survey (2015)

In relation to the level of awareness of partnering by the respondents, a criteria which is mainly attributed to partnering as a procurement option was asked to serve as a check to

actually understand or inquire how knowledgeable the respondents were and from the indications obtained from the survey, win-win situation which is a unique attribute to partnering obtained greater response from all the respondents(clients, contractors and consultants) to such relationship indicating high level of awareness on partnering. A percentage response of 87.9% was indicated by the clients, 91.7 % for the contractor, and 71.6% is an indication made by the consultants. From indications, the respondents are quite aware of the partnering concept. Figure 4.11 below shows the percentage response of the various respondents on the direct relationship to partnering.

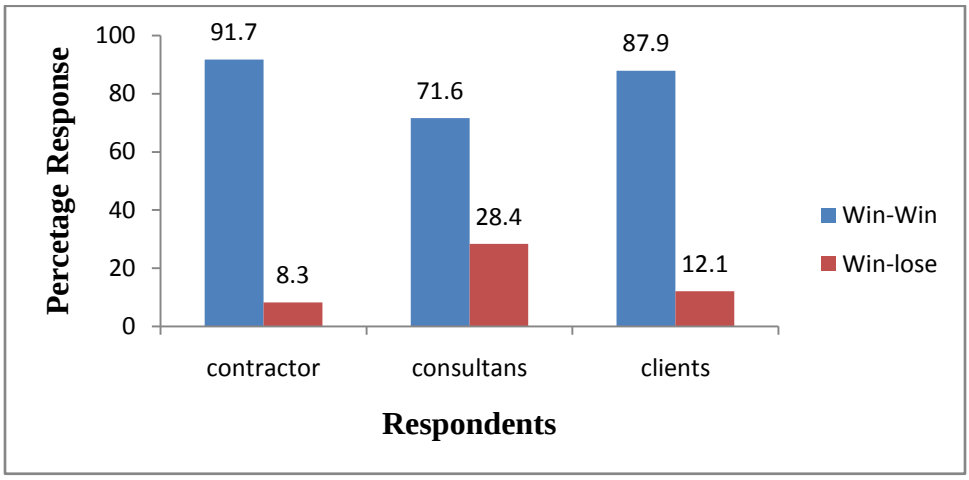


Figure 4.11Unique attribute to Partnering relationship
Field Survey (2015)

Respondents were asked to indicate if a project was ever handled in relation to partnering and a percentage response of 87.9% was obtained for the clients. The responses however obtained for both the contractors and consultantsshowed higher response in handling a partnered project. Figure 4.12 depicts the various percentage responses and indications were made that for the contracting firm, just 5.0% admit to ever handling a partnered project while 95.0%of the respondents (contractors) indicated not handling a partnered project. For the consultancy firm also, 6.8% indicated ”yes” to such question and 93.2% respondents

indicated “no” to ever handling a partnered project. When further asked about the expectations regarding the "partnered" projects’ satisfaction, the same percentage responses obtained by respondents (clients, consultants and contractors) indicating involvement in partnering admitted satisfaction when subsequently asked.

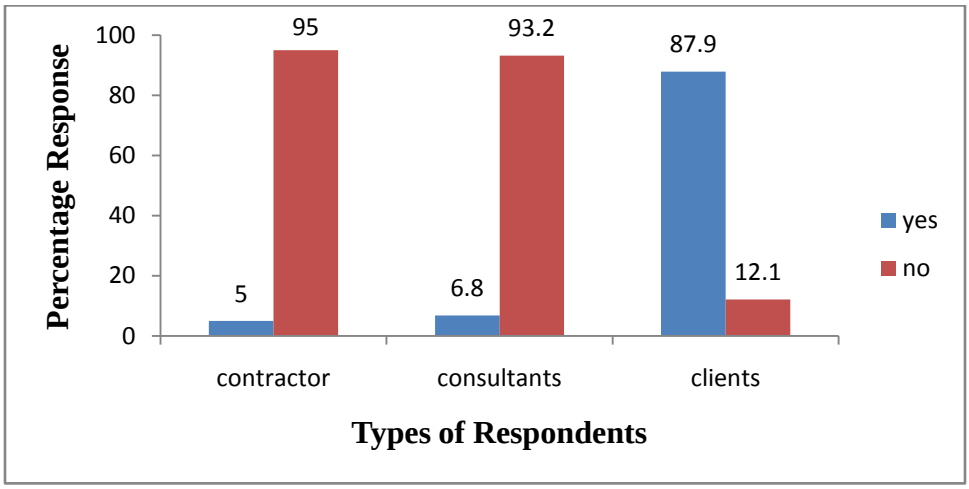


Figure 4.12Partnered Project handled by respondents.
Field Survey (2015)

When further inquiry was made on the prospects of partnering as a procurement option in Nigeria, high positive responses were obtained from all respondents (clients, contractors and consultants) with a percentage response of 91.7% and 85.1% fromthe contracting and consultancy firm respectively all indicating “yes” to such question. For the clients also, the responses obtained from the survey indicated high optimism when asked about the future prospects of partnering as a procurement option in Nigeria as “Yes” was indicated for the future prospects of Partnering in Nigeria. This is as indicated in Figure 4.13. For the respondents (contractors and consultants) who viewed that there is no prospect of partnering in the Nigerian Construction Industry,they mentioned that the lack of prospects will be due to the corrupt practices in the industry, lack of trust for other parties, the partnering process itself and the knowledge and skills involved in partnering.

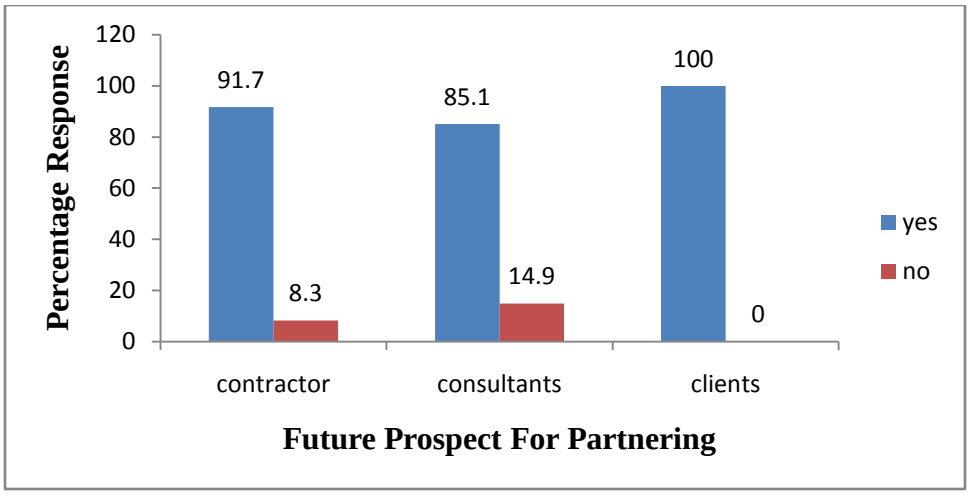


Figure 4.13 Future Prospects for Partnering in Nigeria as Indicated by the Respondents
Field Survey (2015)

Respondents (contractors and consultants) were further asked on the most efficient and suitable procurement methods for various types of projects (i.e. large, medium and small scale projects). According to the study conducted by Oladirin (2013), conclusion was made that no procurement system is a do it all (a procurement system may perform better than the other in an instant and fail in others) as revealed in the findings. In respect to this therefore, respondents were asked to choose in their own view which system of procurement is best applicable to a project with respect to size or scale, with the view to know how well these respondents are conversant with the procurement system especially with regards to partnering.

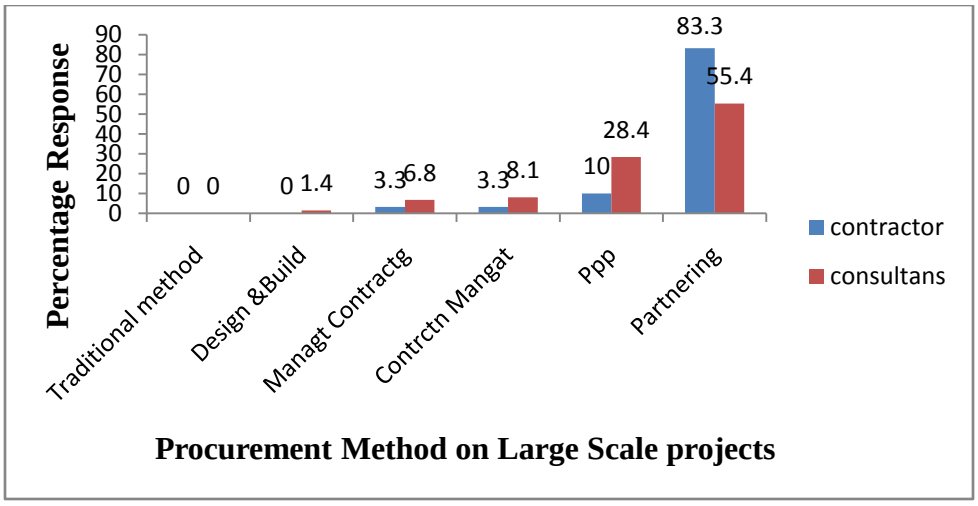


Figure 4.14 Procurement Method on large Scale Projects (Contractors and Consultants)
Field Survey (2015)

With regards to the procurement method suitable for large scale projects, a unanimously high response rate was given to partnering as the most suitable procurement system for such type of project. According to Bennett and Sidwell (2001), the fundamental problem is that the interdependencies between the separate professionals and trade roles have changed and more information has to be communicated faster, and traditional processes being the most used in the industry, have no robust ways of dealing with the resulting complex patterns of high impact interdependencies.

For the contracting firm, 83.3% was obtained for partnering as the most suitable procurement methods for large scale projects. While 55.4%, was indicated by the consultant for the same reason. However, few responses were indicated for Private-Public Partnership, Construction Management and Management contracting as the most suitable procurement method for a large scale project with responses from the contracting firm to be 10.0%, 3.3%, and 3.3% respectively and for the consultancy firm, the response rate obtained was 28.4%, 8.1%, 6.8% and 1.4% respectively. These result indicated that respondents in both firm are

knowledgeable on partnering and up to date with the current trend on procurement system despite little responses obtained for procurement systems such as management contracting, construction Management and Public-Private-partnership. However as indicated by literatures, is quite acceptable particularly as the latter two methods are almost solely developed for use on high-value and complex projects as indicated by CIOB (2010).Bennett and Sidwell (2001) also reemphasized that management construction and construction management tends to be used on large, complex, individually designed projects often using innovative technologies.

As CIOB (2010) noted that, there are different types of procurement routes available andeach procurements has its own advocates and inherent strengths and weaknesses, therefore the selection of an absolute optimal procurement method is difficult as even the most experienced client or contractor cannot know all the potential benefits or risks for each method.

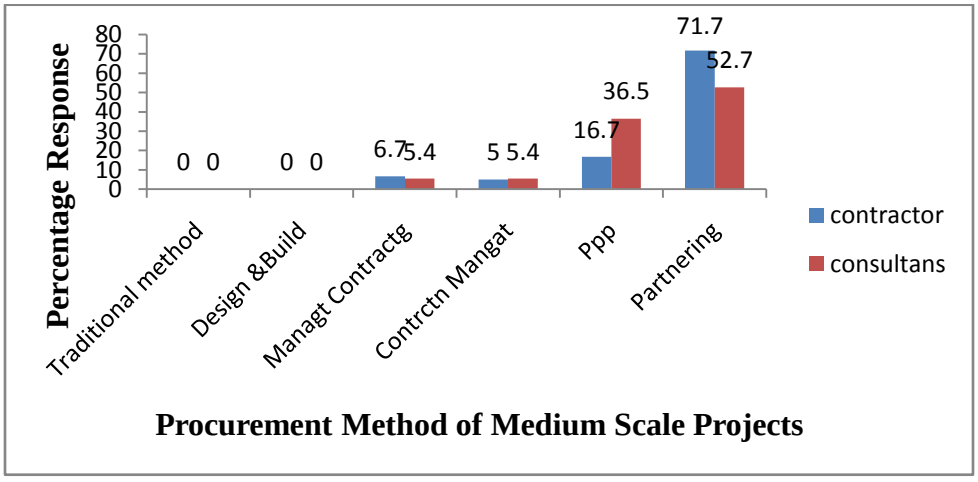


Figure 4.15Procurement Method on Medium Scale Project (Contractors and Consultants).
Field Survey (2015)

For the responses on the most suitable procurement method for a medium scale project, the responses were quite controversial as high responses were indicated by the respondents on Partnering and Public private partnership. As depicted in figure 4.15, 71.7% responses and 52.7% responses were indicated for partnering by the contracting and consultancy firm respectively as the most suitable procurement method for a medium scale project. Public-Private-Partnership was indicated for the same reason with a percentage of 16.7% and 36.5% from the contracting and consultancy firm respectively. However, few responses were indicated for management contracting and construction management for this same reason with no indications for design and build and the traditional method of procurement.

For the small scale projects, the respondents indicated fewer responses for partnering as the most suitable procurement method for such type of project scale, the responses were distributed among the various options provided. However, traditional method of procurement got the highest number of responses from both firm with 41.7% as indicated by the contractors and 36.5% from the consultants as the most suitable procurement method for a small scale project. Design and Build also got a relatively high response from respondents of both firms with indication of 25.0% and 23.0% from the contractors and the consultants respectively, Management contracting and construction Management both got the same responses from both firms with the percentage response of 10.0% and 6.8% from the contracting and consultancy firm respectively. Public-Private-Partnership however got a relatively high response from the consultancy firm with a percentage of 21.6% as an indication of being the most suitable procurement option for a small scale project, although the respondents from the contracting firm has an opposite view to this, by indicating few responses to the same option with just 10.0%. This is as depicted in figure 4.16.

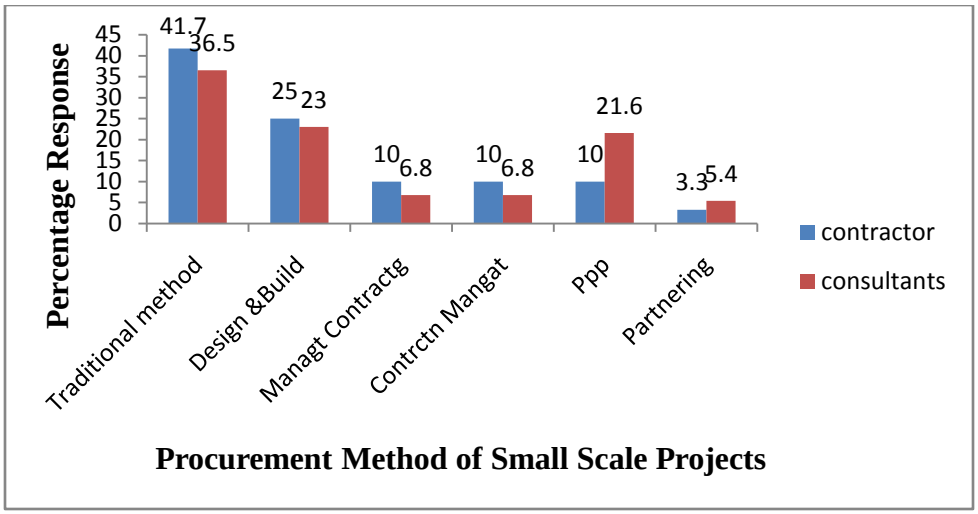


Figure 4.16 Procurement Method on Small Scale Projects (Contractors and Consultants)
Field Survey (2015)

According to the research carried out by Oladirin(2013), the traditional system of procurement is the most adopted option in project execution in Nigeria. From the responses obtained and analyses carried out by the researcher, the level of awareness on partnering is quite remarkable and the level of adaptability of such procurement method was further investigated on the respondents. Despite the level of awareness and knowledge on partnering as indicated by the respondents, analyses done showed little adaptability on such procurement method and this is could probably be due to the fact that collaborative working practices and relationships associated with partnering are well-regarded on high-value,high-risk projects as indicated by CIOB 2010. Bennett and Sidwell (2001) also, clearly points out that in such procurement method, if one party in partnering under performs then all the other partners are at risk of losing their rewards (profits and incentives) and could even share losses according to the agreed project pain sharing/gain sharing models. Other reasons for the low responses on the adaptability of partnering from the respondents could be due to the sizes of the respondents' organizations' firm, as the analyses done on the type of

organizations' firm indicated higher responses to small and medium firms for both the contracting and the consultancy firm.

Adnan *et al.*, (2010) noted that, Small contractors are in a great need to practice the concept of partnering to enable them to determine their goals, to educate all parties of each other's goals and to shape them into common goals and mission, stressing further that the re-shaping of these sometimes common, divergent goals into one cohesive team and purpose leads to a successful project. As indicated by Miller *et al.*, (1998), plethora of reports with regards to the construction industry concludes that the industry must employ new technologies and processes. And CIOB (2010) indicated that partnering is the "most efficient" way of undertaking all kinds of construction works (including new buildings and infrastructure, alterations, refurbishment and maintenance) as the long-term (strategic) partnering showcase the real benefits of the procurement method, short-term (project-specific) partnering proved highly beneficial on individual projects.

4.5 Benefits of Partnering as a Procurement Method in the Nigerian Construction Industry

There are various benefits of partnering as posited in various literatures such benefits include improved efficiency and cost-effectiveness, increase innovation opportunities, and the continuous improvement of quality products and services, knowledge sharing, technical sharing, profit and losses sharing, efficient management, higher decision making skills, transfer of ideas from different thinking (Adnan *et.al,.* 2011, Al-Amoudi 2011,Chen and Wu 2010), achievement of project completion to both parties satisfaction,opportunity for participants to develop a working atmosphere conducive for innovation, teamwork, trust and

commitment, among other benefits (CII, 1991 In Najimu 2010,Samaraweera 2013). Respondents were ask to choose in terms of relevance among the factors listed as the benefits of partnering depending on their view and Table 4.1 shows in rank which factor is beneficial in adopting partnering in Nigerian construction industry as seen by the clients.

Table 4.1: Benefits of Partnering as a Procurement Method in Nigerian Construction Industry (Clients)

s/no	Benefits of Partnering	5	4	3	2	1	∑f	∑fx	Mean	RII	Position
1	Achieving better buidability	26	7				33	158	4.8	0.96	1st
2	Developing an environment for a long-team profitability	26	5	2			33	156	4.7	0.94	2nd
3	Better opportunity for innovation and value engineering	20	10	3			33	149	4.5	0.90	3rd
4	Achieving a win- win Situation	17	11	5			33	144	4.4	0.88	4th
5	Enhanced dynamic organizational structure and clear chain of communication	10	23				33	142	4.3	0.86	5th
6	Reduce the rate of Litigation	14	14	3	2		33	139	4.2	0.84	6th
7	Less administrative and legal costs.	10	20		3		33	136	4.1	0.82	7th
8	Eliminating contractual Conflict	17	5	5	6		33	132	4.0	0.80	8th
9	Improved project outcomes in terms of cost, time and quality	21			12		33	129	3.9	0.78	9th
10	Enhance value on long term relationship	3	20	10			33	125	3.8	0.76	10th

Source: Field Survey (2015)

From the survey carried out, all the factors have high RII rating as it is above 0.60. The respondents (clients) ranked “achieving better buidability” with a very high RII rating of

0.96 as the most beneficial fact in adopting partnering in Nigerian construction industry while "Enhance value on long term relationship" was the least beneficial factor when ranked according to the respondents however it has a high rating of 0.76. All the highest ranking beneficial factors according to the respondents are in line with what is posited by Awodele (2014) as the benefits of adopting partnering in Nigerian construction industry stating thatit will increase the opportunity for innovation, especiallyin the development of value engineering changes andconstructability improvement.

Respondents from both the contracting and consultancy firm were ask to choose in terms of relevance among the factors listed as the benefits of partnering depending on their view and Table 4.2 and 4.3 shows in rank which factor is beneficial in adopting partnering in Nigerian construction industry as seen by the contractors and consultancy respectively. Oyedele (2013) criticized the Nigerian construction industry stating that it is highly litigious and has high appearance record in Nigerian court. And as depicted in Table 4.2, the responses obtained from the contractors was quite impressive as the contractors viewed or ranked "reduction in the rate of litigation" as the most beneficial factor in adopting partnering in the Nigerian construction industry with a very high RII value of 0.99. However,"enhanced dynamic organizational structure and clear chain of communication"was ranked as the least beneficial factor in adopting partnering in Nigerian construction industry, although it has a high RII value of 0.72.

Table 4.2: Benefits of Partnering as a Procurement Method in the Nigerian Construction Industry (Contractors)

s/no	Benefits of Partnering	5	4	3	2	1	∑f	∑fx	Mean	RII	Position

1	Reduce the rate of Litigation	56	4				60	296	4.93	0.99	1st
2	Better opportunity for innovation and value engineering	55	3	2			60	293	4.88	0.98	2nd
3	Improved project outcomes in terms of cost, time and quality	50	10				60	290	4.83	0.97	3rd
4	Achieving better buidability	45	15				60	285	4.75	0.95	4th
5	Eliminating contractual Conflict	45	10	5			60	280	4.67	0.93	5th
6	Developing an environment for a long-team profitability	40	15	5			60	275	4.58	0.92	6th
7	Achieving a win- win Situation	35	20	5			60	270	4.5	0.90	7th
8	Less administrative and legal costs.	10	30	15	5		60	225	4.25	0.85	8th
9	Enhance value on long term relationship	15	25	10	5	5	60	220	3.67	0.73	9th
10	Enhanced dynamic organizational structure and clear chain of communication	10	27	13	10		60	217	3.62	0.72	10th

Source: Field Survey (2015)

As for the consultants' view however, on the most beneficial factors of adopting partnering in the Nigerian construction industry, "better opportunity for innovation and value engineering" was ranked first with a very high RII value of 0.86.It is interesting to know that both the consultants and the contractors unanimously viewed "enhanced dynamic organizational structure and clear chain of communication" as the least beneficial factor in adapting partnering in the Nigerian construction industry. However, Exploring Procurement in the Construction Industry (2010) emphasized the vitality of communication between industry, consultants and clients in achieving best practice with

regards to procurement, which in turn reduces the need to alter client requirements and clarifications of each party's responsibility. A low RII value of 0.59 was however, obtained for "enhanced dynamic organizational structure and clear chain of communication" from the consultants' perspective. Table 4.3depicts the RII ranking of the benefits of Partnering in Nigerian Construction Industry as viewed by the consultants.

Table 4.3: Benefits of Partnering as a Procurement Method in the Nigerian Construction Industry (Consultants)

s/no	Benefits of Partnering	5	4	3	2	1	∑f	∑fx	Mean	RII	Position
1	Better opportunity for innovation and value engineering	35	31	4	4		74	319	4.3	0.86	1st
2	Reduce the rate of Litigation	61	11	2			74	296	4	0.80	2nd

3	Enhance value on long term relationship		40	29	5	74	220	3.97	0.79	3rd
4	Improved project outcomes in terms of cost, time and quality	53	11	10		74	290	3.92	0.78	4th
5	Achieving better buidability	69	5			74	285	3.85	0.77	5th
6	Eliminating contractual Conflict	20	45	9		74	280	3.78	0.76	6th
7	Developing an environment for a long-team profitability	63	11			74	275	3.72	0.74	7th
8	Achieving a win- win Situation	6	60	8		74	270	3.65	0.73	8th
9	Less administrative and legal costs.	25	33	10	6	74	225	3.04	0.61	9th
10	Enhanced dynamic organizational structure and clear chain of communication	41	30	3		74	217	2.93	0.59	10th

Source: Field Survey (2015)

4.6 Challenges of Partnering as a Procurement Method in the Nigerian Construction Industry

Table 4.4 depicts the ranking of the factors that are seen as challenges of adopting partnering in Nigerian construction industry by the clients. However, all the rating of such challenges assessed where on the high rating. “Inadequate knowledge and skills of the partnering process” pose the highest challenge as seen by the respondents (clients) with a very high rating of 1.0. “Integration of firm’s culture”was ranked as the least challenges in adopting partnering with high RII ratingof 0.78. These challenges faced by

the respondents in adopting partnering may be due to the nature of the Nigerian construction industry as emphasizedOyedele (2013) that the Nigerian Construction industry faces a significant number of challenges including the lack of local skilled labor, power shortage, the unavailability of materials, and unethical practices. Also stating further that the industry is neither organized nor controlled,Underfunded, and thelifespan of construction project in Nigeria are unpredictable.

Table 4.4: Clients' Challengesof Partnering as a Procurement Method

s/no	Benefits of Partnering	5	4	3	2	1	∑f	∑fx	Mean	RII	Position
1	Inadequate knowledge and skills of partnering process	32	1				33	164	5.0	1.0	1st
2	Partnering process and procedure	30	2	1			33	161	4.9	0.98	2nd
3	Risk and reward sharing	29	3	1			33	160	4.8	0.96	3rd
4	Trust	24	9				33	156	4.7	0.94	4th
5	Team Commitment	23	7	3			33	152	4.6	0.92	5th
6	Corruption	17	16				33	149	4.5	0.90	6th

7	Partner selection	19	8	6	33	145	4.4	0.88	7th
8	Communication gap	16	10	7	33	141	4.3	0.86	8th
9	Conflict of interest and legal framework	3	26	4	33	131	4.0	0.80	9th
10	Integration of firms' culture	2	25	6	33	128	3.9	0.78	10th

Source: Field Survey (2015)

Table 4.5 and 4.6 depicts the ranking of the challenges of adopting partnering as a procurement method in Nigerian construction industry as viewed by the contractors and consultants respectively. The contractors perceive "inadequate knowledge and skills of partnering process" as the most challenging factor in adopting partnering in the industry with a very high RII value of 1.00. AsBennett and Sidwell(2001) pointed out that the underperformance of any one party in partnering poserisk of losing rewards (profits and incentives) to all other partners and losses could be shared according to the agreed project pain sharing/gain sharing models. Also in the same vain, "corruption" was ranked the least challenging factor in adopting such procurement method in the industry. It was ranked with a high RII value of 0.77 as showed in Table 4.5.

Table 4.5Contracting Challenges in Partnering Procurement

s/no	**Benefits of Partnering**	**5**	**4**	**3**	**2**	**1**	**∑f**	**∑fx**	**Mean**	**RII**	**Position**
1	Inadequate knowledge and skills of partnering process	60					60	300	5	1.00	1st
2	Risk and reward sharing	56	4				60	296	4.93	0.99	2nd
3	Partnering process and procedure	54	6				60	294	4.9	0.98	3rd
4	Trust	53	6	1			60	292	4.87	0.97	4th
5	Communication gap	49	9	2			60	287	4.78	0.96	5th

6	Integration of firms' culture	45	15		60	285	4.75	0.95	6th
7	Team Commitment	47	8	5	60	282	4.7	0.94	7th
8	Conflict of interest and legal framework	40	15	5	60	275	4.58	0.92	8th
9	Partner selection	35	21	4	60	271	4.52	0.9	9th
10	Corruption	58	1	1	60	297	4.95	0.77	10th

Source: Field Survey (2015)

Table 4.6 indicates the RII ranking of the consultants' perception on the challenges of adopting partnering in the Nigerian Construction industry. 'Corruption' was ranked first with a very high RII value of 0.99. CIOB (2010) stressed that partnering requires mutual trust and an open relationship between parties, which results in a combined drive to achieve improvement and best practice. The consultants perceived 'inadequate knowledge and skills of partnering process' as the least challenging factor in adopting partnering as a procurement option in the Nigerian construction industry. Although, Oladirin*et.al* (2013) noted that different procurement system varies from each other in relation to allocation of responsibilities, activities sequencing, process and procedure and organizational approach in project delivery. On the basis of the challenging factors, the consultants and contractors have opposing views as to what is the most or least challenging factor of adopting partnering in the Nigerian construction industry.

Table 4.6Consultancy Challenges of Partnering as Procurement in Building

s/no	**Benefits of Partnering**	**5**	**4**	**3**	**2**	**1**	**∑f**	**∑fx**	**Mean**	**RII**	**Position**
1	Corruption	71	3				74	367	4.96	0.99	1st
2	Partnering process and procedure	66	8				74	362	4.89	0.98	2nd
3	Trust	63	11				74	359	4.85	0.97	3rd

4	Risk and reward sharing	63	9	2		74	357	4.82	0.96	4th
5	Communication gap	59	10	5		74	350	4.73	0.95	5th
6	Team Commitment	58	11	3	2	74	347	4.69	0.94	6th
7	Partner selection	61	13			74	357	4.82	0.9	7th
8	Conflict of interest and legal framework	20	47	7		74	309	4.18	0.84	8th
9	Integration of firms' culture	30	24	20		74	306	4.14	0.83	9th
10	Inadequate knowledge and skills of partnering process	70	4			74	300	4.05	0.81	10th

Source: Field Survey (2015)

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter relates to the summary, conclusion and recommendations of the research work based on the discussions and inferences drawn from the survey conducted on respondents by the researcher. Conclusions were drawn up scientifically from the analysis of the findings. Relevant recommendations were also made based on the findings. Major contributions to knowledge of the study were also delineated. Due to the fact that the concept of partnering is a relatively new method of procurement method, especially to the Nigerian construction industry, some areas were noted for further studies.

5.2 Summary of Findings

The major findings of the research can be summarized as below:

1. 90.9% of the responses from the clients indicated awareness on partnering as an alternative procurement method and 87.9% indicated "win-win" which is a unique

attribute to partnering as being directly related to partnering. 91.7% was the percentage response obtained for the level of awareness on partnering by the contractors and the same percentage response was also obtained for “Win-Win” as the direct relationship to partnering. For the consultants, 77.0% was the indication made for the awareness of partnering while 71.6% was obtained for “Win-Win” as the direct relationship to partnering.

2. Despite the level of awareness and knowledge on partnering as indicated by the respondents, analyses done showed little applicability on such procurement method as 5.0% and 6.8% were the indications made by contractors andconsultants for handling a partnered project. However, high percentage response was obtained for the clients with a percentage response of 87.9%.
3. Factors regarded as benefits of partnering as procurement method were ranked according to relevance by the respondents(clients, contractors and consultants) and according to the clients,‘Achieving better buidability’ was ranked highest with a very high rating of 0.96 RII as the most beneficial factor in adopting partnering in Nigerian construction industry. ‘Enhance value on long term relationship’ was the least beneficial factor when ranked according to the clientswith a high RII rating of 0.76.For the contactors and consultants, ‘reduction in the rate of litigation’ was ranked as the most beneficial factor in adopting partnering in the Nigerian construction industry with a very high RII value of 0.99as indicated by the contractors while the consultants viewed ‘better opportunity for innovation and value engineering’, ranked with a very high RII value of 0.86 as the most beneficial factor. Both firms however, viewed

‘enhanced dynamic organizational structure and clear chain of communication’ as the least beneficial factor in adopting partnering in Nigerian construction industry, although it has a high RII value of 0.72 as indicated by the contractors, while a low RII value of 0.59 was indicated by the consultants.

4. On the other hand, among the challenges of partnering as a procurement method in the Nigerian construction industry, ‘inadequate knowledge and skills of the partnering process’ pose the highest challenge as ranked by both the clients and contractors with a very high RII rating of 1.0 and ‘Integration of firm’s culture’ with a high RII rating of 0.78 was ranked as the least challenges in adopting partnering by the clients. Although, the contractors are of different opinion on the least challenging factor in adopting partnering as an alternative procurement method in the industry as ‘corruption’ was rankedwith a high RII value of 0.77 as the least challenging factor. However, for the consultants,‘Corruption’ was ranked highest as the most challenging factor with a very high RII value of 0.99 and ‘inadequate knowledge and skills of partnering process’ was the least challenging factor in adopting partnering as a procurement option in the Nigerian construction industry as ranked by the consultants with a high RII value of 0.81.

5.3 Conclusion

On the research findings, the following conclusions were drawn:

1. The major stakeholders of the construction industry (clients, contractors and consultants) were all aware of partnering as a procurement method with higher

percentage of such stakeholders indicating “win-win” which is a unique attribute of partnering as direct relationship to such procurement method.

2. Regardless of the level of awareness and knowledge on partnering as indicated by the contractors and the consultants, the research carried out showed little applicability (5.0% and 6.8% respectively)on such procurement method by these stakeholders, however, the clients indicated high *adoptability* (87.9%) on such procurement method.
3. ‘Achieving better buidability’, ‘reduction in the rate of litigation’ and ‘better opportunity for innovation and value engineering’ were noted as the most beneficial factor in adopting partnering in Nigerian construction industry as seen by the clients, contractors and consultants respectively. However, enhance value on long term relationship,was viewed by the clients as the least beneficial factor in adopting partnering while both the consultants and the contractors unanimously viewed enhanced dynamic organizational structure and clear chain of communicationas the least beneficial factor of adopting such procurement method in the Nigerian construction industry.
4. Both the clients and contractors share the same view on the most challenging factor of partnering as a procurement method, noting that ‘inadequate knowledge and skills of partnering process’ pose the highest challenge in adopting this procurement process, while ‘Integration of firm’s culture’ and ‘corruption’ were viewed as the least challenging factor in adopting partnering as a procurement option in the Nigerian construction industry respectively. The consultants

however, viewed‘Corruption’ as the most challenging factor viewing ‘inadequate knowledge and skills of partnering processes’ as the least challenging factor.

5.4 Recommendations

In determination of the prospects of partnering as a procurement method in the Nigerian construction industry as perceived by the major stakeholders of the construction industry,the following recommendations were made based on the research findings, observations and conclusions.

1. High indications were noted by the client (100%), contractors (91.7%), and consultants (85.1%) for the future prospects of partnering in the Nigerian construction industry therefore, both the consultants and the contractors should adopt partnering as a procurement method especially for large projects in order to gain the benefits of such procurement process.
2. Adequate knowledge and skills of this procurement process need to be acquired by all stakeholders involved in the construction processes beforehand so as to handle the factors or impediments which will limit the application of partnering as a procurement method in the Nigerian Construction Industry.
3. In the partnering process, critical considerations need to be noted on corruption and enhanced dynamic organizational structure and clear chain of communication as the vitality of communication and the adverse effect of corruption in the industry cannot be over emphasized.

5.5 Contribution to Knowledge

In line with the research findings, inferences and recommendations, the following can be outlined as the major contributions of the study on existing knowledge:

1. The research was able to identify little applicability of partnering bystakeholders (contractors and consultants) in the Nigerian construction industry.
2. The study established high level of awareness of partnering as a procurement method in Nigeria by the major stakeholders in the construction industry.
3. The research was able to identify the most beneficial factors of partnering as a procurement method as perceived by various stakeholders (Clients, Contractors and Consultants) in the construction industry.
4. The work subsequently established the most challenging factorsof partnering as a procurement method in the Nigerian construction industry as viewed by the major stakeholders in the industry.

5.6 Areas for Further Study

It is important to note that, based on the research much is yet to be covered with regards to partnering in the Nigerian construction industry.This research work covers few areas on partnering therefore, the following areas may be considered for further study:

1. The same research problems may be investigated on different population of construction stakeholders such as private property developers, suppliers among others in the construction industry.
2. The effect of the components of partnering in relation to the stakeholders can facilitate further research in understanding the concept of this procurement method.

3. Further investigation on the Critical success factors of partnering is necessary to understand how this procurement method can be adopted in Nigerian construction Industry.
4. Reason for not adopting partnering by stakeholders (contractors and consultants) can further be investigation.

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APPENDIX I: QUESTIONNAIRE

Department of Building
Faculty of Environmental Design
Ahmadu Bello University, Zaria

Research questionnaires for Consultants and Contractors

Introduction

This questionnaire is being administered for an MSc. Thesis entitled "**ASSESSMENT OF THE PROSPECTS OF PARTERING IN THE NIGERIAN CONSTRUCTION INDUSTRY**".

You are kindly requested to carefully study this questionnaire and provide your sincere response. Any information given would be used strictly for academic purpose and respondents are guaranteed maximum confidentiality.

Please tick (√) as appropriate.

SECTION A: ORGANISATION'S DATA

1. Name of firm (optional) …….
2. Type of firm a. Contracting Firm [ ] b. Consultancy Firm [ ]
3. Indicate your profession

   a. Architect [ ]
   b. Building engineer [ ]
   c. structural/civil engineer [ ]
   d. Quantity surveyor [ ]
   e. Services engineer [ ]
   f. If any please specify ……
4. Academic qualification

   a. Higher diploma [ ]
   b. Professional diploma [ ]

c. Bachelor of science/eng Degree [ ]
d. Masters of science Degree [ ]
e. If any other please specify ……

5. Professional qualification
   a. Nigerian institute of builders (NIOB) [ ]
   b. Nigerian institute of Architect (NIA) [ ]
   c. Nigerian institute of Quantity surveyors (NIQS) [ ]
   d. Nigerian Society of engineer (NSE) [ ]
   e. If any other specify …….
6. Job level in the firm
   a. Senior Management Level [ ]
   b. Middle Management Level [ ]
   c. Lower Management Level [ ]

7. Years of professional experience
   a. 1- under 5 years [ ]
   b. 5- under 10 years [ ]
   c. 10-under 15 years [ ]
   d. 15 years and above [ ]
8. Number of employees in the firm
   a. 0- under 49 employees [ ]
   b. 50- under 250 employees [ ]
   c. 250 and above [ ]
9. Number of project handled
   a. None [ ]
   b. 1- under 5 [ ]
   c. 5- under 10 [ ]
   d. 10 and above [ ]
10. Firm's major type of client? a. Public Sector [ ] b. Private Sector [ ]
    b. Corporate [ ]

SECTION B. (LEVEL OF AWARNESS AND ADAPTABILITY OF PARTNERING AS A PROCUREMENT METHOD)

11. Are you aware of partnering as an alternative to other procurement methods?
    a. Yes [ ] b. No [ ]

12. Which of the following is directly related to partnering system of procurement?
    a. Win-win [ ] b. Win- lose [ ]

13. Which of the following procurement methods do you perceive to be the most efficient and suitable for **LARGE SCALE** projects?

    a. Traditional Method [ ]
    b. Design and Build [ ]
    c. Management Contracting [ ]
    d. Construction Management [ ]
    e. Private/Public Partnership [ ]
    f. Partnering [ ]
    g. If any other specify …….

14. Which of the following procurement methods do you perceive to be the most efficient and suitable for **MEDIUM SCALE** projects?
    a. Traditional Method [ ]
    b. Design and Build [ ]
    c. Management Contracting [ ]
    d. Construction Management [ ]
    e. Private/Public Partnership [ ]
    f. Partnering [ ]
    g. If any other specify …….

15. Which of the following procurement methods do you perceive to be the most efficient and suitable for **SMALL SCALE** projects?

    a. Traditional Method [ ]
    b. Design and Build [ ]
    c. Management Contracting [ ]
    d. Construction Management [ ]
    e. Private/Public Partnership [ ]
    f. Partnering [ ]
    g. If any other specify …….

16. Has your organisation ever handled a project using partnering?

    a. Yes [ ] b. No [ ]

17. If yes to question 16 above, were your expectations regarding the "partnered" project satisfied?

    a. Yes [ ] b. No [ ]

18. Is there any future prospect for partnering as a procurement option in Nigeria?

    a. Yes [ ] b. No [ ]

19. If **NO** to Question 18 above, why? ……..

SECTION C. [BENEFITS OF PARTERING AS A PROCUREMENT METHOD IN NIGERIAN CONSTRUCTION INDUSTRY]

Please tick (√) as appropriate.

S/No	Benefits of partnering	**Very Relevant**	**Relevant**	**Fairly Relevant**	**Irrelevant**	**Very Irrelevant**

1.	Achieving a win- win Situation					
2.	Achieving better buidability					
3.	Improved project outcomes in terms of cost, time and quality					
4.	Better opportunity for innovation and value engineering					
5.	Less administrative and legal costs.					
6.	Enhance value on long term relationship					
7.	Enhanced dynamic organizational structure and clear chain of communication					
8.	Reduce the rate of Litigation					
9.	Eliminating contractual Conflict					
10.	Developing an environment for a long-team profitability					

SECTION D [CHALLENGES OF PARTNERING AS A PROCUREMENT METHOD IN NIGERIAN CONSTRUCTION INDUSTRY]

Please tick (√) as appropriate

S/No	Challenges of partnering	**Very Relevant**	**Relevant**	**Fairly Relevant**	**Irrelevant**	**Very Irrelevant**

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	Partner selection Corruption Trust Communication gap Team Commitment Integration of firms' culture Conflict of interest and legal framework Risk and reward sharing Partnering process and procedure Inadequate knowledge and skills of partnering process					

APPENDIX II: QUESTIONNAIRE

Department of Building
Faculty of Environmental Design
Ahmadu Bello University, Zaria
Research questionnaires for Clients

Introduction

This questionnaire is being administered for an MSc. Thesis entitled "**ASSESS THE PROSPECTS OF PARTERING IN THE NIGERIAN CONSTRUCTION INDUSTRY**".

You are kindly requested to carefully study this questionnaire and provide your sincere response. Any information given would be used strictly for academic purpose and respondents are guaranteed maximum confidentiality.

Please tick (√) as appropriate.

SECTION A: ORGANISATION'S DATA

1. Name of client (optional) …….
2. Type of client a. Public [ ] b. Private [ ] b. corporate [ ]
3. Indicate your profession as a client/client's representative.

   a. Architect [ ]
   b. Building engineer [ ]
   c. structural/civil engineer [ ]
   d. Quantity surveyor [ ]
   e. Services engineer [ ]
   f. If any other please specify ……
4. Academic qualification

   a. Higher diploma [ ]
   b. Professional diploma [ ]
   c. Bachelor of science/eng Degree [ ]
   d. Masters of science Degree [ ]
   e. If any other please specify ……
5. Professional qualification

   a. Nigerian institute of builders (NIOB) [ ]
   b. Nigerian institute of Architect (NIA) [ ]
   c. Nigerian institute of Quantity surveyors (NIQS) [ ]
   d. Nigerian Society of engineer (NSE) [ ]
   e. If any other specify …….
6. Job level as the client/client's representatives
   a. Senior Management Level [ ]

   b. Middle Management Level [ ]
   c. lower Management Level [ ]
7. Years of experience in the construction industry.

   a. 1-under 5 years [ ]
   b. 5-under 10 years [ ]
   c. 10-under 15 years [ ]
   d. 15 years and above [ ]
8. Number of project handled

a. None [ ]
b. 1- under 5 [ ]
c. 5- under 10 [ ]
d. 10 and above [ ]

SECTION B. (LEVEL OF AWARNESS AND ADAPTABILITY OF PARTNERING AS A PROCUREMENT METHOD)

9. Are you aware of partnering as an alternative to other procurement methods?

   a. Yes [ ] b. No [ ]

10. Which of the following is directly related to partnering system of procurement?

    a. Win-win [ ] b. Win- lose [ ]

11. Have you ever practise project partnering?

    a. Yes [ ] b. No [ ]

12. If Yes to Question 11 above, were your expectations regarding the "partnered" project satisfied?

    a. Yes [ ] b. No [ ]

13. Is there any future prospect for partnering as a procurement option in Nigeria?

    a. Yes [ ] b. No [ ]

14. If **NO** to Question 13 above, why? ……..

SECTION C. [BENEFITS OF PARTERING AS A PROCUREMENT METHOD IN NIGERIAN CONSTRUCTION INDUSTRY]

Please tick (√) as appropriate.

S/No	Benefits of partnering	**Very Relevant**	**Relevant**	**Fairly Relevant**	**Irrelevant**	**Very Irrelevant**

1.	Achieving a win- win Situation					
2.	Achieving better buidability					
3.	Improved project outcomes in terms of cost, time and quality					
4.	Better opportunity for innovation and value engineering					
5.	Less administrative and legal costs.					
6.	Enhance value on long term relationship					
7.	Enhanced dynamic organizational structure and clear chain of communication					
8.	Reduce the rate of Litigation					
9.	Eliminating contractual Conflict					
10.	Developing an environment for a long-team profitability					

SECTION D [CHALLENGES OF PARTNERING AS A PROCUREMENT METHOD IN NIGERIAN CONSTRUCTION INDUSTRY]

Please tick (√) as appropriate

S/No	Challenges of partnering	**Very Relevant**	**Relevant**	**Fairly Relevant**	**Irrelevant**	**Very Irrelevant**

1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	Partner selection Corruption Trust Communication gap Team Commitment Integration of firms' culture Conflict of interest and legal framework Risk and reward sharing Partnering process and procedure Inadequate knowledge and skills of partnering process					

APPENDIX III

Sample of Partnering Agreements & Charters

Partnering Charter

Charter:

We, ..., are committed to Partnering through the construction, administration and completion of this Project on time and within budget. We agree to make our best efforts to achieve the goals listed below, and believe that these goals reflect our intentions and commitment to the performance of this project as a team.

GOALS

1. Accident-free job site.
2. Resolve all safety issues immediately.
3. No more than two percent cost growth.
4. Complete all contract phases ahead of schedule, including punch-list.
5. By..... (date), define in writing, roles and communication lines for the partnering arrangement.
6. Execute necessary contract changes without delaying the project.
7. Foster a positive job environment.
8. No repeats on notices of deficiencies.
9. Participation of all appropriate team members in the quality control program.
10. Avoid litigation by:
    - Addressing issues and working them out as a team before they become differences.
    - Resolving differences through negotiation.
    - If all other methods fail, obtain a disinterested third party arbitrator's opinion.
11. Build a project of which we can all be proud.
12. Submittal and evaluation of all submittals to avoid delaying project progress.
13. Empower joint problem resolution at the lowest possible level.
14. Foster new ways of doing business.

MISSION

The.....team is committed to providing a quality .....to .....that meets requirements as defined in the contract, on schedule and

within the contract budget. This will be accomplished through establishing and working within a cooperative relationship among team members to achieve the following program goals:

- Deliver on or ahead of schedules
- Produce a quality project that meets or exceeds performance specifications
- Reach timely resolution of all issues
- Achieve zero claims
- Complete testing successfully
- Perform within contract cost
- Use cooperative teams to ensure timely placement of production contract
- Develop and maintain positive working relationships among all stakeholders
- Constantly seek product improvement

PARTNERING AGREEMENT

Between

..... And.....

For

CONTRACT BETWEEN

.....

AND

.....

I. We..... And the Contractor's team personnel dedicated to ....., are committed to a positive utilization of partnering in the performance and administration of this project. We believe that through partnering we will be able to provide a dependable, quality project completed on time and within budget. We will work as a team to build action plans, to break down communication barriers, resolve conflicts at the lowest possible level, to streamline the paperwork process, and build a team spirit to achieve maximum success for all: a quality product that meets all the ..... requirements, on time delivery, within budget, and with a fair profit for the contractor.

II. We are committed to open communications, joint problem solving and teamwork to accomplish all the goals and objectives of the .....contract to include:

a. Adopt a total team approach resulting in an outstanding project team performance.
b. Encouraging information sharing at all levels. All team members will stress the importance of a timely, positive and ongoing communications.
c. Produce high quality cost effective, reliable units.
d. Team members will use The Alternative Dispute Resolution process (to be described in the attached "Partnering Infrastructure") to the maximum extent feasible to reduce and/or eliminate the need for litigation.
e. Encourage all team members to respond swiftly to concerns, deadlines and requests.
f. Achieve and complete all milestones on or ahead of schedule.
g. Successfully complete the project within budget.
h. Each party shall bear their own costs associated with effectuating this partnering effort. There will be no change in the contract price as a result of this partnering effort.
i. The Team process action teams will report regularly to the Management Working Group.

j. If the team determines that it will be useful in advancing the goals of this agreement, partnering workshops may be held to help improve communications and the team efforts. Each party will bear their own costs of participating in these workshops.

k. We believe that this partnering statement will encourage synergy, pride in performance and quality workmanship leading to a showcase project and outstanding project performance.

l. Our goals will be achieved through a commitment to teamwork and partnering characterized by mutual trust, responsiveness, flexibility and open communications. To accomplish these goals we commit to project decision-making at the lowest possible level within the team infrastructure.

m. To facilitate the implementation of the goals set forth in this Agreement, the organizational structure set forth at Attachment 1 is established.

n. This Agreement does not create any legally enforceable rights or duties. Any changes to the contract must be made by the contracting officer under the terms of the written contract. Any changes to the subcontract between ..... and .....must be made by.....'s Subcontracts Manager under the terms of the written subcontract. Rather, the Partnering concept is a team relationship that promotes the achievement of mutually beneficial goals.

APPENDIX IV

Alternative Partnering Agreement

1. We ..... and ....., dedicated to ....., are committed to a positive utilization of partnering in the performance and administration of this

contract. We believe that through partnering we will be able to provide a dependable, reliable, quality product completed on time and with a fair profit for Raytheon. We will work as teams to build action plans, breakdown communications barriers, resolve conflicts at the lowest level possible and build team spirit to achieve the maximum success.

Performance Goals:

- Satisfaction
- Quality Work
- On Time Delivery
- Successful IOT&E
- Re-engineer Administrative processes for cost saving

Communications Goals:

- Timely resolution of conflicts
- Effective and Timely communications
- Minimize oversight
- Resolve issues at lowest level
- Validate Partnering Effectiveness

2. This agreement does not create any legally enforceable rights or duties. Any changes to the contract must be made by the contracting parties under the terms of the written contract. The Partnering concept is a team relationship that promotes the achievement of *mutually* beneficial goals.