

**AN APPRAISAL OF THE CRITICAL SUCCESS FACTORS OF PROJECT
PARTNERING TOWARDS ITS ADOPTION IN THE NIGERIAN
CONSTRUCTION INDUSTRY**

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INDUSTRY**

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DECLARATION

I declare that the work in the thesis entitled “AN APPRAISAL OF THE CRITICAL SUCCESS FACTORS OF PROJECT PARTNERING TOWARDS ITS ADOPTION IN NIGERIAN CONSTRUCTION INDUSTRY” has been performed by me in the Department of Building under the supervision of Prof. Ahmed Doko Ibrahim and Mall. Aliyu M. Ibrahim. The information derived from literature has been duly acknowledged in the text and the list of references. No part of this thesis was previously presented for another degree or diploma at any university.

I declare this work to Humanity.

Suleiman Ayuba Mikhail

.....
Name of Student

.....
Signature

.....
Date

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TABLE OF CONTENTS

Title Page	-	-	-	-	-	-	-	-	-	i
Declaration	-	-	-	-	-	-	-	-	-	ii
Certification	-	-	-	-	-	-	-	-	-	iii
Acknowledgement	-	-	-	-	-	-	-	-	-	iv
Table of contents	-	-	-	-	-	-	-	-	-	v
List of Figures	-	-	-	-	-	-	-	-	-	x
List of Tables	-	-	-	-	-	-	-	-	-	xi
List of appendices	-	-	-	-	-	-	-	-	-	xii
List of Abbreviations	-	-	-	-	-	-	-	-	-	xiii
Abstract	-	-	-	-	-	-	-	-	-	xiv
1.0	INTRODUCTION									
1.1	Background Of The Study	-	-	-	-	-	-	-	-	1
1.2	Statement Of The Problem	-	-	-	-	-	-	-	-	3
1.3	Justification Of The Study	-	-	-	-	-	-	-	-	4
1.4	Aim and Objectives	-	-	-	-	-	-	-	-	5
1.4.1	Aim	-	-	-	-	-	-	-	-	6
1.4.2	Objectives.	-	-	-	-	-	-	-	-	6
1.5	Scope and Delimitation	-	-	-	-	-	-	-	-	7
1.5.1	Scope	-	-	-	-	-	-	-	-	7
1.5.2	Limitation	-	-	-	-	-	-	-	-	7
2.0	LITERATURE REVIEW									
2.1	Introduction	-	-	-	-	-	-	-	-	8
2.2	Origin of Partnering	-	-	-	-	-	-	-	-	8

2.2.1	Definition of Partnering	-	-	-	-	-	-	9
2.2.2	Concept of Partnering -	-	-	-	-	-	-	13
2.3.3	Continuous Improvement	-	-	-	-	-	-	14
2.3	Categories of Partnering	-	-	-	-	-	-	16
2.3.1	Project Partnering	-	-	-	-	-	-	16
2.3.2	Strategic Partnering	-	-	-	-	-	-	16
2.4	Critical Success Factors	-	-	-	-	-	-	17
2.5	Important Features of Partnering	-	-	-	-	-	-	17
2.5.1	Adequate resources	-	-	-	-	-	-	18
2.5.2	Collaboration of Key Project Participants	-	-	-	-	-	-	18
2.5.3	Equal Relationship	-	-	-	-	-	-	17
2.5.4	Efficient Joint problem solving	-	-	-	-	-	-	18
2.5.5	Top Management Commitment	-	-	-	-	-	-	19
2.5.6	Team Integration	-	-	-	-	-	-	19
2.5.7	Mutual Trust	-	-	-	-	-	-	21
2.5.8	Innovation	-	-	-	-	-	-	21
2.5.9	Effective coordination	-	-	-	-	-	-	21
2.5.10	Open communication	-	-	-	-	-	-	22
2.5.11	Continuous improvement	-	-	-	-	-	-	22
2.6	Essential Elements Project Partnering Which Comprises of the Techniques							
	And Procedures:	-	-	-	-	-	-	22
2.6.1	Selection Procedures	-	-	-	-	-	-	22
2.6.2	The Workshop-	-	-	-	-	-	-	22
2.6.3	The Facilitator	-	-	-	-	-	-	23

2.6.4	The Communication Structure	-	-	-	-	-	-	23
2.6.5	Evaluation Procedure	-	-	-	-	-	-	23
2.6.6	Dispute Avoidance Procedure/Resolution Procedure-	-	-	-	-	-	-	23
2.7	Project Partnering	-	-	-	-	-	-	23
2.8	Benefits of Partnering.	-	-	-	-	--	-	25
2.8.1	Reduced Litigation	-	-	-	-	-	-	26
2.8.2	Increase in Cost Control	-	-	-	-	-	-	26
2.8.3	Better Time Control	-	-	-	-	-	-	26
2.8.4	Better Quality Control	-	-	-	-	-	-	26
2.8.5	Efficient Problem Solving	-	-	-	-	-	-	25
2.8.6	Closer Relationships	-	-	-	-	-	-	25
2.8.7	Non-Adversarial Attitude	-	-	-	-	-	-	27
2.8.8	High Level of Mutual Trust	-	-	-	-	-	-	27
2.8.9	Risk and Resources Sharing	-	-	-	-	-	-	27
2.8.10	Better Responsiveness to Problems	-	-	-	-	-	-	27
2.8.11	Enhanced Communication	-	-	-	-	-	-	28
2.8.12	Potential for Innovation	-	-	-	-	-	-	28
2.8.13	Lower Administrative Cost	-	-	-	-	-	-	28
2.8.14	Better Safety Performance	-	-	-	-	-	-	28
2.8.15	Increases Better Job Satisfaction	-	-	-	-	-	-	29
2.8.16	Improves Working Culture	-	-	-	-	-	-	29
2.9	Benefits of Partnering Addresses the Limitation of Current Practice							29
2.10	Partnering Benefits	-	-	-	-	-	-	30
2.10.1	Tangible Benefits	-	-	-	-	-	-	30
2.11.1	Summary of the Intangible Benefits-	-	-	-	-	-	-	30

2.11. Outline of the Intangible Benefits	-	-	-	-	-	-	-	31
2.11.1 An outline of the intangible benefits	-	-	-	-	-	-	-	32
2.12 Potential Barriers to Partnering adoption	-	-	-	-	-	-	-	33
2.12.1 Organisational Formulations	-	-	-	-	-	-	-	33
2.12.2 Cross Cultural Attitudes	-	-	-	-	-	-	-	34
2.12.3 Best Partner Fit	-	-	-	-	-	-	-	38
2.12.4 Financial Concerns	-	-	-	-	-	-	-	39
2.12.5 Client Skills/ Experience	-	-	-	-	-	-	-	40
2.12.6 Legal Motives	-	-	-	-	-	-	-	40
2.13 Why Adopt Project Partnering In Nigeria	-	-	-	-	-	-	-	41
2.13.1 Value for money	-	-	-	-	-	-	-	42
2.13.2 Risk Management Improvement	-	-	-	-	-	-	-	42
2.13.3 Transparency and improvement	-	-	-	-	-	-	-	42
12.18 A brief description of 14 potential factors affecting project partnering Success.	-	-	-	-	-	-	-	43
3.0 RESEARCH METHODOLOGY	-	-	-	-	-	-	-	49
3.1 Preamble	-	-	-	-	-	-	-	49
3.2 Method of Data Collection	-	-	-	-	-	-	-	49
3.3 Population and Sample of the Study	-	-	-	-	-	-	-	49
3.4 Questionnaire Design	-	-	-	-	-	-	-	52
3.5 Questionnaire Administration	-	-	-	-	-	-	-	52
3.6 Method of Analysis and Data Presentation	-	-	-	-	-	-	-	52
4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSIONS								
4.1 Preamble	-	-	-	-	-	-	-	54
4.2 Percentage Response	-	-	-	-	-	-	-	54

4.3	Respondent Profiles	-	-	-	-	-	-	-	58
4.3.1	Respondents Professions	-	-	-	-	-	-	-	58
4.3.2	Respondent Categories on the type of Organization	-	-	-	-	-	-	-	59
4.3.3	Respondents Highest Qualification	-	-	-	-	-	-	-	59
4.3.4	Respondents Professional registration status	-	-	-	-	-	-	-	60
4.3.5	Respondents Working Experience in the Construction Industry	-	-	-	-	-	-	-	60
4.4	Professionals Ranking of the Critical Success Factors as a Tool in Project Partnering In Nigerian Construction Industry	-	-	-	-	-	-	-	61
4.5	Benefits of Project Partnering Projects in Nigeria.	-	-	-	-	-	-	-	64
4.6	Barriers of Project Partnering	-	-	-	-	-	-	-	65
4.7	Comparison of the Perception of the Critical Success Factors of Project Partnering	-	-	-	-	-	-	-	67
5.0	SUMMARY, CONCLUSIONS AND RECOMMENDATIONS								
5.1	Preamble	-	-	-	-	-	-	-	69
5.2	Summary	-	-	-	-	-	-	-	69
5.3	Conclusions	-	-	-	-	-	-	-	72
5.4	Recommendations	-	-	-	-	-	--	-	73
5.5	Contribution to Knowledge	-	-	-	-	-	-	-	74
5.6	Recommendations for Further Studies	-	-	-	-	-	-	-	75
	References	-	-	-	-	-	-	-	76

LIST OF FIGURES

Figure 2.1 Concept Sunflower Model of partnering	-	-	-	12
Figure 4.1 Respondents Professional Profiles	-	-	-	58
Figure 4.2 Distribution of respondents by the type of organisation	-			59
Figure 4.3 Highest qualification obtained	-	-	-	59
Figure 4.4 Professional registration status	-	-	-	60
Figure 4.5 Distribution of respondents by number of years the organisation has been practicing	-	-	-	61

LIST OF TABLES

Table 4.1	Questionnaire Administered	-	-	55
Table 4.2	Respondents Profile	-	-	57
Table 4.3	Critical Success Factors of Project partnering	-	-	63
Table 4.4	Benefits of Project Partnering in Nigeria Construction Industry			64
Table 4.5	Barriers of Partnering Project in Nigeria	-	-	66
Table 4.6	Comparison of the critical success factors of project partnering based on organisation	-	-	68

LIST OF APPENDICES

APPENDIX I - QUESTIONNAIRE	-	-	-	-	83
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LIST OF ABBREBRATIONS

BPP	Bureau of Public Procurement
CSFs	Critical success Factors
CIB	Construction Industry Board
CII	Construction Industry Institute
NCI	Nigerian Construction Industry
NEDO	National Economic Development
PPA	Public Procurement Act
SBD	Standard Bidding Document
TQM	Total Quality Management
UK	United Kingdom
US	United States of America

ABSTRACT

For too long the construction industry has been divided by factionalism and conflict, which has contributed to poor performance, dangerously low profit margins and poor morale among consultants, constructors and suppliers. This study explored the perceptions of Construction industry professional's on the Critical Success Factors (CSFs) of Project partnering in the Nigerian Construction with a view to enhance its adoption. The study also y evaluated the benefits of adopting project partnering as well as the potential barriers affecting adoption of project partnering in Nigeria Construction Industry. A qualitative research design using questionnaire survey was adopted. A total of a hundred and forty (140) questionnaires were distributed with ninety-eight (98) returned well filled giving a percentage response of 70%.The data collected were analysed using a computer based Software (SPSS). Result of the analysis revealed that the respondents ranked 'Mutual trust among party members' (RII.0.85) as the highest CSF tool in project partnering. This was closely followed by 'Top Management support' (RII. 0.81) and 'Preventive conflict resolution strategy' (RII. 0.81) identified as effective CSF factors for project partnering. The result also identified the main barrier to project partnering as 'adversarial relationships' (RII of 0.92) as well as Misunderstanding of the concept' (RII 0.90). No Doubt there are several benefits of Project partnering as it was attested to by the respondent that it establishes good team work relationship (RII 0.81). Thus from the ongoing, it was recommended that; all stake holders in the construction industry should work together in prompting Mutual trust among party members. The study also recommends further research on CSFs on partner selection on project partnering in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The practical application of Partnering in construction had created concern in many countries over the years had created immense awareness on project quality, cost and delivery within schedule. Many researchers advocate the fact that partnering process have a substantial positive impact on project performance, not only with regards to time, cost and quality objectives, but also with regard to more general outcomes such as greater innovation and improved user satisfaction (Latham, 1994; Bennett and Jayes, 1995; Bennett and Jayes, 1998; Bresnen and Marshall, 2000).

The client's perceptions for a successful project outcome and satisfaction have become the major issue that have created concern over the past three decades (Egan, 1998). According to Chan *et al* 2004, increase in competition, risk and poor performance in construction works have given rise to searching for other procurement options other than the traditional procurement methods. The most prevalent issues faced in the traditional procurement is adversarial among the parties of the construction industry. This problem has developed to lack of cooperation, and lack of trust among the construction professionals (Ibrahim, 2005).

Some of the major setbacks caused by the traditional procurement method were its inability to address fragmentation among the stakeholders in the construction industry. Fragmentation is the chain of functions between the parties to a project. The architect design, engineers prepare the services design, the quantity surveyor, provides the cost estimation of the project. This network of functions by the parties prolongs the duration of the contract (Kubau, 2009;Gunathilaka *et al.*, 2013).

Inter-organisational crisis between stakeholders is another issue affecting the construction process in the Nigerian construction. Disputes and claims are mostly prevalent between the contracting organisations either between the contractor and client, or between consultants and clients. Resolving adversarial activities lead parties into claims, litigations or arbitrations are the likely to occur. These are only a few major setbacks that arise during a contracting process in Nigerian construction industry (Idoro and Okun, 2009).

According to Latham (1994) and Egan (1998) achieving the client's objectives and product satisfaction is regarded as the project success. The problem is quiet similar when we refer to how the construction process operates in Nigeria. It is quiet irritating that the clients are rarely satisfied with the product they require. However several professionals in Nigeria have advocated for an adoption of other innovative approach to the current procurement method to achieve efficiency and effectiveness. These professionals considered partnering as a possible solution to the procurement problems faced in Nigerian Construction industry. Partnering/collaborative procurement is one of such innovative processes that can to bring about the much needed continuous improvement and desired change in the construction industry (Bala, 2000; Faruk, 2014).

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. The different parties are normally independent firms and organizations, with separate goals and objectives and different operation procedures. Typically problems that occur are lack of communications and co-ordination leading to changes and alterations during the process. This again causes disputes, rising costs and reduced performance and quality (Li *et al.*, 2000; Bygballe and Sward, 2010).

Over the past two decades researchers have acknowledged partnering as an innovative approach for the procurement of construction projects effectively, and it has become a primary management strategy for improving performance and organisational relations in projects (Black *et al.*, 2000; Li *et al.*, 2000; and Bresnen and Marshall, 2000 Dikmen *et al.*, 2008).

According to Ibrahim (2005) using partnering as a procurement option will alleviate construction delays, cost overrun, and quality. Saka (2013) investigated the applicability of partnering in Nigeria pointing out that practicing partnering is low in Nigeria but more effort need to be put in place to improve in its adoption. While Awodele and Ogunsemi (2007), investigated on the benefits of the generalised strategic partnering in the Nigerian construction industry laying more emphasis on south - south geographical location of Nigeria. According to Awodele and Ogunsemi (2007) partnering is a good development to Nigeria which is practiced mainly in the oil sector and few banks in Nigeria. Acquiring the knowledge of the Critical Success Factors (CSF), benefits, and barriers of project partnering will enhance drastic improvement in its applicability and consequently lead to its formal adoption in Nigerian. From the ongoing, this research intends to explore the (CSF) and benefits of Project Partnering in the Nigerian construction Industry.

1.2 Statement of the Problem

In the UK, the lack of satisfaction of clients had lead to major investigations and the reports developed solutions and concepts mostly linked to trust and cooperation in the procurement among stakeholders in the UK construction industry. This concept termed partnering emerged from these reports as major solution in contract procurement and execution (Latham, 1998 and Egan, 1994).

In Nigeria, the poor performance in the construction sector resulted to the establishment of the bureau for public procurement. The BPP produced two documents to serve as a guide in the procurement of public projects which are; ‘the public procurement manual’ and ‘the Standard Bidding Document’ (SBD). These two documents addressed issues regarding transparency and the selection of the lowest evaluated tender but no mention was made of partnering concept therein. The non inclusion of project partnering concept in the BPP guides assumed that there should be established practices for projects in Nigeria.

The absence of standard procedures to set out how transparency, quality and cost can be achieved through project partnering in the construction project would lead to varied understanding of the concept as well as varied methods in the practices. The non-inclusion of guidelines for Project Partnering implementation towards the attainment of quality, cost and early completion in public procurement in Nigeria since the enactment of Public procurement authority makes the study of the state of the art of PP application in the procurement of public buildings a necessity (PPA, 2007).

Saka (2013) found out that the few firms that carried out Project Partnering in Nigeria do it based on the client request; even though the type of client indicated are mainly in the banking, oil and gas sector. Conversely, no research on Project partnering in the construction industry have been carried out in spite of the fact that there are various professionals actively involved for the success of a construction project. Thus, this study seeks to appraise the (CSFs) of project partnering towards its adoption in Nigerian construction industry.

1.3 Justification of the Study

For too long, the construction industry has been divided by factionalism and conflict, which has contributed to poor performance, dangerously low profit margins and poor

morale among consultants, constructors and suppliers. Understandably, clients in both the public and the private sectors have become increasingly dissatisfied. What they see is unpredictability and under-performance. What they receive is too often of poor quality, late and overpriced, provided by a process seldom offering best value (Oladipo, 2012).

Oyodele (2013), argued that the construction industry is challenged by the lack of collaboration between parties and unethical traditional practice in the Nigerian building industry. This had resulted in the producing low quality building structures. Observers noted that the different stakeholders acknowledged the dissatisfaction of its effectiveness due to the lack of TQM culture and also the fact that more building collapse are experienced during the recent years causing loss of human lives, money and properties (Dikko, 2013). Gunatilaka, Tuuli and Dainty (2013) is of the view that the need to utilize and also to improve the chance to deliver projects with high quality performance at a minimum cost, a collaborative or partnering approach need to be evaluated and improved.

Previous study by Ibrahim (2005) has identified the importance of trust and cooperation in the Nigerian construction industry. Public and private client demand for Project Partnering practices as the key motivation for undertaking Project partnering. Saka (2013) further revealed that the lack of understanding and the absence of a standardized methodology for the practice are barriers to the adoption of Project Partnering in the Nigeria (Saka, 2013).

In Nigeria, the current knowledge of project partnering and skills of practitioners in implementing project partnering remains unknown and non-provision of guides by the bureau for public procurement could lead to lack of understanding and application of project partnering in Nigeria.

Thus, this study seeks to investigate the critical success factors and barriers of project partnering practice in procurement of public buildings towards its implementation. Despite

the inherent difficulty of the task, clients have every right to expect buildings and infrastructure to meet all their functional requirements, have low maintenance costs and be produced efficiently. The challenges faced with the construction industry are tough but can be solved effectively by collaborative approach such as partnering, relational contracting, and joint venture.

The study of CSFs of project partnering in the Nigerian construction industry will contribute seriously in improving TQM performance. In addition to the study will enable the limited resources of power, labour, and budget to be allocated judiciously in projects both on the private and public projects respectively (Gransberg *et al.*, 1999).

1.4 Aim and Objectives

1.4.1 Aim

This study aim at appraising the critical success factors, benefits, and potential barriers of project partnering in Nigerian construction industry with a view to enhancing its adoption.

1.4.2 Objectives.

- 1 To evaluate critical success factors influencing the adoption of project partnering in Nigeria.
- 2 To evaluate the benefits of adopting project partnering in Nigerian construction Industry.
- 3 To analyse the potential barriers affecting adoption of project partnering in Nigeria.
- 4 To compare the organisational perceptions in respect to the CSFs of partnering.

1.5 Scope and Delimitation

1.5.1 Scope

The research focuses on the project partnering within Nigeria Construction industry only. Consequently, it appraised the pinion of only the professionals involved in the construction industry only. It is obvious that since project partnering is at its infant stage the research will encompass the few states which partnering was used as a process of contract procurement. Therefore the research populations were respondents from organisations within Abuja, Kaduna and Katsina. These locations were chosen because most of the clients (Public Institutions), just like the consultants and the contractors, are located in the north central which is the area of study. Also these states were chosen because they are sates where major construction works are conducted.

Limitation

The study is limited to the professionals in the construction industry in the organisations in the Study areas. Irrespective of the respondents' category; as client, consultant, contractor, it is worthy to note that the accuracy of the study is limited to the perception of the respondent. However, proper care was taken to ensure that the respondents were experienced and knowledgeable of project partnering and its challenges within the North central region of Nigeria.

CHAPTER TWO

2.0 LITRATURE REVIEW

2.1 Introduction

Defining partnering will assist in understanding the concept, partnering in construction is not a neatly defined concept. While some researchers have done more than enough to comprehensively explain the subject matter. Many of such publications from literature were more similar than differences in opinion regarding its definition (Naoum, 2001). This means an informal agreement between participants which gears towards achieving trust, cooperation, and commitment to target goals and also assists in eradicating any adversarial aspects such as conflicts and claims.

2.2 Origin of partnering

The first broad application of partnering in the construction industry was by the US Army Corps of Engineers in the late 1980's. Traditional methods of competitive tendering together with one-sided contracts and ineffective administration were leading to cost overruns and delay in completion. Furthermore litigation was becoming a significant problem. The Corps proposed a process whereby, post-tender process, the successful contractor and the employer would discuss the nature of the project they were building and their mutual expectations. Project goals would be defined and issues of concern and potential challenges openly discussed with a view to identifying and sharing risks. The result was a partnering agreement or charter jointly signed by all participants outlining mutually agreed-upon goals and principles (Shamu, 2001). Partnering was first applied in the UK in the North Sea oil and gas industries in the early 1990s. Major industry players such as British Petroleum were driven to this new model in an attempt to achieve profitability from what would have been otherwise their uneconomic oil fields.

The new approach proved successful in achieving significant cost savings in construction process for the employers and in creating increased profits for the participating partners (Bennett and Jayes, 1995).

The form of partnering is quite different from the US Corps of Engineers' approach with individual contracts between the employer and each partnering member and an additional agreement binding all parties to the alliance. In 1994 Sir Michael Latham, commissioned jointly by the government and the construction industry to conduct an independent review of what was generally accepted to be an under-performing construction industry. The main outcome of the 'Constructing the Team' report was that the employer should be at the core of the construction process. The use of teamwork and co-operation was advocated to improve client satisfaction. The specific method recommended was the use of project partnering (Latham, 1994).

2.2.1 Definition of partnering

Partnering is a process of establishing a moral contract or charter among the project team members which will bind each party to act in the best interest of the project and the project team members. Crowley and Karim (1995) used an organisation's point of view to define partnering. Partnering can be conceptually viewed as an organisation that is formed by resolving conflicts, expediting decision-making and increasing organisational competence in achieving project goals.

The United States Construction Industry Institute (CII, 1991) and the United Kingdom's Construction Industry Board (CIB, 1997) conducted some famous research into partnering. They had developed their only definition of partnering.

The CII (US) defines partnering as:

.... *“a long-term commitment between two or more organizations for the purposes of achieving specific business objectives by maximizing the effectiveness of each participant resources. This requires changing traditional relationships to a shared culture without regard to organizational boundaries. The relationship is based on trust, dedication to common goals, and an understanding of each other’s individual expectations and values”* (CII, 1991)

The CIB defines partnering as:

“a structured management approach to facilitate team working across contractual boundaries... it should not be confused with other good project management practice, or with long-standing relationships, negotiated contracts, or preferred supplier arrangements, all of which lack the structure and objective measures that must support a partnering relationship” (CIB, 1997).

NEDO defines partnering as;

.... *a contractual arrangement between a client and his chosen contractor which is either open ended or has a term of a given number of years rather than the duration of specific project. During the life time of the arrangement, the contractor may be responsible for a number of projects, large or small and continuing maintenance work shut downs. The arrangement has either formal or informal mechanisms to promote cooperation between parties”* (NEDO, 1991)

The Associated General Contractors define partnering as;

“Partnering is a way of achieving an optimum relationship between a customer and a supplier. It is a method of doing business in which a person’s word is his or her bond and where people accept responsibility for their actions. Partnering is not a business contract but recognition that every business contract includes an implied covenant of good faith.” (AGC, 1991)

While strategically, it can denote a continual contract management approach in regulating successive timing over a long period of time. According to Crowley & Karim (1995) partnering can be defined in one of the following three major ways: the 'attributes' of partnering, such as compatible goals, mutual trust, long-term commitment the 'process' that led to the outcomes where partnering is used as a verb to indicate an action, such as commitment to common goals, organizing partnering workshops, developing trust.

Bennett and Jayes (1995) define partnering as a management approach used by two or more organisations to achieve specific business objectives by maximising the effectiveness of each participant's resources. The approach is based on mutual objectives, an agreed method of problem resolution, and an active search for continuous measurable improvements." This definition develops the idea of the need for the measurement, on a continuous basis, of any improvements to be achieved. Crowley and Karim (1995) used an organisation's point of view to describe partnering as an organisation that is formed by resolving conflicts, expediting decision-making and increasing organisational competence in achieving project goals.

They defined partnering as an organisation (that) implements a cooperative strategy by modifying and supplementing the traditional boundaries that separate companies in a competitive market. In this way, partnering wraps the major project participants into an alliance that creates a cohesive atmosphere for the project team members to openly interact and perform.

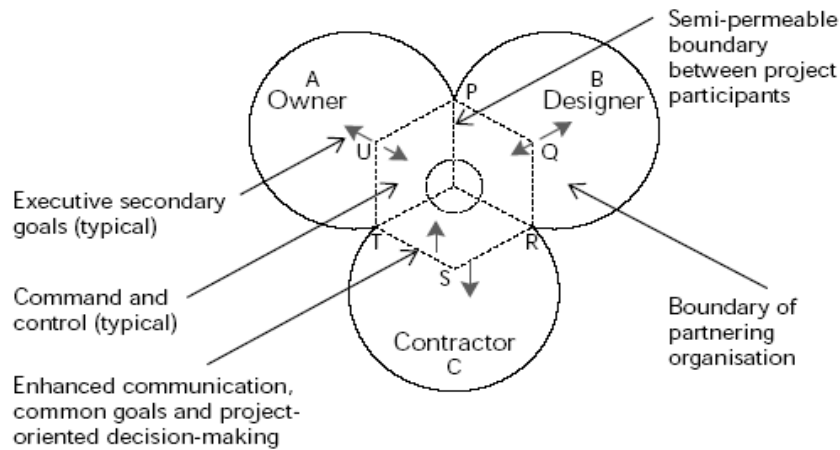


Figure 2.1 Conceptual Sunflower Model of Partnering (Source: Crowl and Karim, 1995).

Egan (1998) explains partnering to involve two or more organisations working together to improve performance through agreeing mutual objectives, devising a way for resolving disputes and committing themselves to continuous improvement, measuring progress and sharing the gains. Egan further consider partnering to be a ‘tool to tackle fragmentation’, which is increasingly used by the best firms in place of traditional contract-based procurement and project management. Building on their earlier work, Bennett and Jayes (1998) introduced the idea of three generations of partnering, developing in an evolutionary manner as the working relationship between partners develops. They indicated that extensive research and analysis suggests that a second generation style of partnering, with greater degree of sophistication than that previously used and with a higher level of strategic decision making, had emerged. In this case, there is a deeper understanding of the essential elements required. This has consequently led to defining partnering as “a set of strategic actions which embody the mutual objectives of a number of firms achieved by cooperative decision-making aimed at using feedback to continuously improve their joint performance”. This second generation partnering begins with a strategic decision to cooperate by a client and a group of consultants, contractors and specialists engaged in an ongoing series of projects. Bennett

and Jayes (1998) jointly established a Strategic Team that builds up the ‘Seven Pillars of Partnering’. These seven pillars are:

2.2.1.1 Strategy: developing the client’s objectives and how consultants, contractors and specialists can meet them on the basis of feedback;

2.2.1.2 Membership: identifying the firms that need to be involved to ensure all necessary skills are developed and available.

2.2.1.3 Equity: ensuring every participant is rewarded for their work on the basis of their fair prices and fair profits.

2.2.1.4 Integration: improving the way the firms involved work together by using cooperation and building trust.

2.2.1.5 Benchmark: setting measured targets that lead to continuous improvements in performance from project to project.

2.2.1.6 Project Processes: establishing standards and procedures that embody best practice based on process engineering.

2.2.1.7 Feedback: capturing lessons from projects and task force to guide the development strategy.

2.2.2 Concept of partnering

Partnering is a formulated management process set up to extend across contractual boundaries. Its fundamental components are formalised mutual objectives, agreed problem resolution methods, and an active search for continuous measurable improvements (CII, 1991).

Partnership in law term, applies to an association of two or more persons who have agreed to combine their labour, property, and skill, or some or all of them, for the

purpose of engaging in lawful business and sharing profits and losses between them in this definition the term *business* includes every trade, occupation, and profession. The parties forming such an association are known as partners. Partners may adopt a fictitious name or use a real family name.

2.2.3 Continuous improvement

One of the main benefits of partnering is that there is a continuous process of seeking opportunities to improve performance. Partnering is a structured process designed to create an atmosphere of commitment, cooperation, and collegial problem-solving among organizations and individuals that work together on a project (Cowan et al., 1992). According to Bresnen and Marshall (2000) Partnering uses mutually developed vision statements, common goals, guiding principles, issue resolution procedures, and evaluation methods to help ensure project success. The process is normally initiated at a workshop at the beginning of the project. Ibrahim (2005) posits that all individuals are considered equal in the workshop. No participant or firm should be allowed to dominate the workshop process. All parties need to recognize that partnering is the building of the team to complete the project. Partnering does not change the parties' contract obligations but it facilitates the manner in which the contracting parties treat each other during the course of contract performance. It also creates a climate in which the interests and expectations of the contracted parties are more readily achievable (Cheng and Li, 2004). Finally, a written charter is created during the workshop that states the parties' common interests in reducing time-consuming and costly disputes, as well as improving communications to the benefit of all parties.

According to Bennet and Jayes (1995) Partnering should include the end user of the project or facility. Customers need to be involved in the partnering process from start to

finish. They provide valuable information about their project needs and can participate in problem-solving sessions at the workshop and follow-up meetings, and may gain a better understanding of where their money is going when contract modifications are required. A typical goal of the partnering team is to deliver a quality project to the customer that meets the customer's functional needs and financial constraints. Customer satisfaction is an essential ingredient in virtually all partnering efforts. The costs for partnering generally include one to three days of the participants' time at the start of a project to conduct the workshop and later for any follow-up sessions. There are also the facilitator's fees for these meetings. These costs are small however when a project is delivered within the customer's budget at a profit for the supplier and ahead of schedule. The time required is small in comparison to the time saved over the course of the project. At the initial workshop, many partnering teams will identify and resolve potential problems. This can prevent weeks or months of delay later in the project. During the project, the team use partnering procedures to work together to avoid other schedule delays and to achieve project goals. Follow-up sessions are sometimes delayed or cancelled because of the pressures of project performance and completion schedules. This prevents the partnering process from effectively working when it is most needed. It takes a strong commitment to partnering to ensure that follow-up sessions take place when everyone is otherwise busy. Cheng and Li (2004) insists to avoid this problem, a schedule for the follow-up sessions should be established during the initial workshop.

Subcontractors should participate to inform the other participants of their interests and value to the project. Subcontractors should learn and appreciate what is important to the other project participants. Subcontractor participation in the workshop can help prevent disputes during project performance. Trust and communication are two essential

elements of a successful partnering relationship. In case any team member feels that other team members are taking advantage another party the trust will be taken for granted. Team members are encouraged communicate this feelings to the others when the issue arises (Tyler and Matthews, 1996; Chan et al., 2003).

2.3 Categories of Partnering

Although cooperative working can take many forms, all seek to address the issue of disputes and claim directly. Naoum (2001) posited that it is based on the simple premise that “better results can be achieved for all participating companies if they work together towards agreed goals rather than as individual companies each with its own separate agenda and objectives”. The most common forms of partnering approach can be categorised as follows:

2.3.1 Project partnering

This term sometimes referred to as project alliancing. This type of arrangement lasts for the duration of a single project and the contract may be awarded competitively. In this instance, the arrangement can be between the owner and single contractor, but more commonly it is between owner and several contractors (Tyler and Matthews, 1996). There is a variation of project-specific partnering where the arrangement is underpinned by an incentive scheme, whereby the rewards of the contractors and the owner are linked to actual performance during the execution n phase of the project.

2.3.2 Strategic partnering

Strategic partnering: this type of arrangement generally covers the provision of services for the execution of series of projects over a specified period of years rather than a single project. It is most commonly used between the owner and a single contractor but could involve more than one contractor and it is a period of time. This development of

sustainable relationships between two or more organisations, to work in cooperation for their mutual benefit in the requisition and delivery of works, goods and or services over a specified period to achieve continuous performance improvement. It is most commonly used between the owner and a single contractor and maybe an open-ended relationship (Naoum, 2001). Ibrahim (2005) posits that it should be noted that project partnering does not have to be a contract. Commonly, a *charter* is drawn up and signed, usually at a *workshop* which contains the goals for the project. The charter lies next to the ‘contract’ and promotes the agreed way of working together rather being a legal commitment. However, in the development of the charter, the participants may create legal relationships they did not intend.

2.4 Critical Success Factors

The CSF procedure for problem solving according to Rockart’s research is a procedure that attempts to identify factors vital to the success of the industry, organization or the individual’s work. Rockart’s methodology consists of identifying key goals from the organization’s strategies and objectives (Rockart, 1979). From these factors variables are determined which are critical to obtaining the identified goals. The procedure begins by conducting interviews with senior management using the “CSF interview process” (Rockart, 1979). General factors are outlined then explored as to how the interviewee would prioritize the identified CSFs before determining suitable measures in identifying each CSF. In Rockart’s studies, the final set of CSFs was used to develop the required information databases.

2.5 Critical Success Factors of Project Partnering

It has been suggested by Naoum (2001) that the essence of partnering is the recognition of common goals and the creation of an atmosphere of trust, teamwork and goodwill

which will facilitate the achievement of these goals. Tyler and Matthews (1996) established that the most successful key partnering elements. The elements are set to serve as the key critical success factors. Successful partnering cannot be achieved without utilising these critical success factors effectively. They are as follows;

2.5.1 Adequate resources

For effective partnering to be well implemented there must be adequate funds to facilitate its coordination. Each involved party supplies adequate resources to share with other members in a partnering relationship, which are enough to support a successful partnering (Crowley and Kareem, 1995).

2.5.2 Collaboration of key project participants

Open sharing of best practices in value engineering, together with a focus on design innovation, simplification and optimisation, and constructability at the earliest possible opportunity provides significant potential for reducing project costs and schedules (Chan et al., 2003b). Apart from these benefits, early selection and involvement means that all the participants have an opportunity to develop other key aspects of successful alliances before project execution starts (Hellard, 1995).

2.5.3 Equal relationship / win –win attitude

This requires that firms develop agreed objectives, as well as finding ways of accommodating each other's individual objectives. A critical hurdle to be overcome in arriving at a successful win-win relationship is that of identifying the risks associated with a project and apportioning these between the parties (Matthews et al., 1996).

2.5.4 Efficient Joint-problem solving

Partnering provides a way to develop a control and resolution mechanism for dealing with problems (Cowan *et al.*, 1992). The partners anticipate potential problems and

devise an action plan addressing how those problems are jointly identified and resolved. The partnering agreement allows each party the opportunity of learning and using the other's problem-solving methods. Cheng and Li (2001) concluded that partnering helps eliminate many personal and organizational conflicts.

2.5.5 Top Management commitment

For the introduction, supporting, and marketing of the partnering concept, convincing doubters and finding individuals who can nurture the partnering process on a day-to-day basis are crucial at both inter-organisational and project levels (Crowley and Karim, 1995). This can be aided by ensuring that all those involved in the arrangement understand that its goals are mutually agreed, and are not imposed from above or by the client (Li et al., 2001).

2.5.6 Team integration

The creation of an effective wholly integrated project team is crucial to success. There are two aspects to this:

2.5.6.1 Project team integration

One of the key underpinning concepts of partnering is that each of the parties retains responsibility for delivering the part of the project for which it has been selected (e.g. design, fabrication, construction), but at the same time there is a collective responsibility for delivery of the complete project. The team formation structure of the project must be constructed in such a way that it recognises and demonstrates these two points. The allocation of personnel to the team, and especially to key positions, must reflect individual corporate accountability (Tyler and Matthews, 1996). Each of the key functional areas (e.g. design, fabrication, construction) of the team should be led by a person from the party that is accountable for that function (Chan et al., 2008).

To reflect the collective responsibility of the parties, the organisations should be constructed in such a way that it eliminates duplication of function to the maximum extent possible. Areas where needless duplication can often occur include planning, cost control, procurement and technical and safety regulations (Bresnen and Marshall, 2000). The parties should take active steps to determine the extent to which duplication might or does occur and to explore every opportunity for integrating such functions. In doing so, care must be taken to ensure that individual corporate needs are met. Creating an integrated team can bring immediate benefits through a reduction in the manpower resources allocated to the project. It also offers the possibility of other efficiency gains through having single point accountability and more transparent processes than might otherwise be the case (Chan *et al.*, 1996; Cheng and Li, 2004).

2.5.6.2 Project team commitment

Ultimately, an alliance derives its main power from the effectiveness of the project team. It is widely recognised that it is people and the way in which they work individually and collectively that is the main determinant of the results obtained. According to Okae-Adow (2013) posits that the performance of a team can be linked to a number of key factors, including: Clear and good leadership skills; team capability and adaptability; clear roles and responsibilities; effective communication throughout the team; understanding of and alignment with project aims; motivation and commitment to achieve results; dispute avoidance culture; recognition and acknowledgement of contributions; encourage team integration.

2.5.7 Mutual trust

The majority of participants in alliances have asserted that trust is an essential element of success, and the importance of trust has been borne out by studies of such arrangements. The Construction Industry Institute has an accepted definition of ‘trust’ on which the following definition is based: Trust is the confidence and reliance one party has in the professional competence while integrity of the other party (parties) to contribute to the successful execution of a project in a spirit of openness, fairness and cooperation”. It is important to recognise that trust is usually developed and strengthened over time as the alliance participant’s work with each other (Latham, 1994).

2.5.8 Innovation/Creativity

Innovative thinking and the application of new approaches, both at a technical level and at an engineering and business process level, drive the achievement of significantly improved performance. Thus creating structures and processes to encourage and promote innovative thinking and application should be a key focus for those participating in an alliance. Cheng et al. (2000) noted that there must be continuous improvement through all phases of the project from inception to completion.

2.5.9 Effective coordination

Chan et al. (2003b) posited that the need for strong and effective communication is always important in partnering. Relationships must be open and honest between all the parties involved. It promotes all the key behavioural aspects of collaboration, and is particularly important in encouraging everyone to confront issues and differences of view from the perspective of developing solutions rather than allowing them to escalate into disputes.

2.5.10 Open communication

Adnan and Mortlege (2003) opines that companies participating in an alliance should also give very careful thought to considering what information can be shared with the other members of the alliance. In the more information that is relevant to developing the understanding of the others that can be shared the better. In some instances this may include information that individual companies have previously considered to be confidential. Personal contact between key staff on a day-to-day basis as well as at regular meetings is important.

2.5.11 Continuous improvement

The traditional responsibility for improvement primarily rests with the contractor who is assumed as a burden maker, while the client and consultants act as a sceptical judge (Cowan, 1991). Partnering provides a way for all parties to develop continuous improvement. It is a joint effort and with a long-term which focus on eliminating for wasteful barriers to improvement (Kwan and Efori, 2001).

2.6 Essential elements Project Partnering which Comprises of the Techniques and Procedures

2.6.1 Selection procedures

These are constructed to ensure that the parties involved in the partnering process will be compatible and committed (Moore et al., 1992). This normally involves a two-stage process of selection by questionnaire and interview (Li et al., 2000).

2.6.2 The workshop

All parties and stakeholders attend a partnering workshop at which the objectives for the project and of the parties are aligned and the ground rules for the partnering arrangement established (Ibrahim, 2005).

2.6.3 The facilitator

According to Ibrahim (2005) posits that there are sets of aspirations and expectations of the parties and the relationships that they hope to achieve. It is not intended to be a contractual document nor does it supersede the contract. While the contract establishes the legal relationship between the parties, it is the charter which is concerned with the working relationships. It is in effect a statement of how the parties intend to conduct themselves.

2.6.4 The communication structure

Open and full communications between the parties is a necessary condition of partnering. The structure of communications and relationships at all levels, both on and off-site, is agreed at the workshop (Abudayyeh, 1994; Love et al., 2000).

2.6.5 Evaluation procedure

Continuous monitoring is essential to ensure that the partnering relationship is achieving its objectives and those of the project. This is facilitated by a jointly formulated and agreed procedure (Mohr and Spekman, 1994; Moore, et al., 1992).

2.6.6 Dispute avoidance procedure/resolution procedure

A jointly agreed procedure must be established for the avoidance and resolution of issues arising. The problem has to be issue resolved at the earliest possible opportunity at the lowest possible level of authority, subject to any contractual and/or statutory rights of the parties (Sanders, 1992; Okea and Adow, 2013).

2.7 Project Partnering

Construction project partnering was initially used by the U.S. Army Corps of Engineers in the 1980's more as a means to reduce the number of contract disputes caused due to extra costs incurred for unexpected risks. The partnering process was incorporated into

the construction procurement process from the initial stages of the project itself and involved all the project participants: the owner (The U.S. Army Corps of Engineers), the design team, the prime contractor, and the subcontractors. All the parties involved in the construction process had to agree to specific management procedures and develop a working relationship before the construction project got underway. It was found that the projects that used the partnering process had a lower cost growth, lesser contract modifications, increased savings due to value engineering, and also helped to build up trust among all the participants involved.

The projects that utilized the partnering process were shown to be more cost effective for all the parties involved and there was also a better utilization of resources. Also, the owners and contractors had more opportunities to be innovative in improving the quality of the final built product (CII, 1991). The study by Chan et al. (2003a) found that there was a better value to be realized by all the parties.

Partnering thus creates an environment to minimize cost growths and schedule overruns, establish good working relationships between stakeholders, and most importantly create a winning situation for all the parties involved in the construction procurement process (Crowley and Karim, 1995 Chan et al., 2004). Though partnering may not be able to resolve all the problems arising during the construction process it helps to create an effective framework to reduce litigation, improve communication, resolve conflicts, and contain costs on potential overruns. It was also found that the parties who committed to the partnering process were rewarded in that they were able to develop strategic relationships which were mutually beneficial to them in cultivating their business (Chan et al., 2004).

2.8 Benefits of Partnering.

Partnering provides benefits, to the owner, the general contractor, and the subcontractors (Matthews et al., 1996). The fundamental principles of partnering – commitment, trust, respect, communication, and equality – are designed to include proper consideration of the interests of all parties at every level (CII, 1991; Cowan *et al.*, 1992). The partnering process empowers all the project personnel to accept responsibility and their jobs by delegating decision-making and problem-solving to the lowest possible level of authority. It is an opportunity to improve the open competitive bid process through the closer personal contacts that partnering requires. According to Cheng and Li (2002b) suggests that common benefits of partnering can be segmented in the following headings: reduced litigation, better cost control, better time control, better quality product, efficient problem solving, closer relationship, enhanced communication, continuous improvement, potential for innovation, lower administrative cost, better safety performance, increased satisfaction and improved culture.

2.8.1 Reduced litigation

Litigation is a major problem in most construction projects. It does not help realize potential saving. In partnering arrangement, the problems of disputes, claims or litigations are greatly reduced through open communication and improved working relationship (CII, 1991). Gransberg *et al.* (1999) advocated that dispute and claim cost on partnering projects was relatively low. Similar conclusions can be found in the research conducted by Lai and Lam (2001). Bayliss (2000) reported that not a single dispute had escalated to litigation in these partnering projects. This was in contrast to the number of disputes received on non-partnered contracts of similar scale.

2.8.2 Increase in cost control

Partnering has a great potential to improve cost performance (Aje and Famakin, 2012). Partnering reduces the risk of budget overruns because of improved cost control (Li *et al.*, 2001). The reasons for better cost performance are many, such as: alleviating rework, reducing scheduled time, heightening involvement of team members, improving trust, reducing scope definition problems, opening communication, lowering change order rates, improving problem solving, eliminating blame shifting, improving understanding of project objectives and decreasing adversarial relations.

2.8.3 Better time control

Partnering can reduce delay as a result of better schedule performance Cowan *et al.*, (1992), timely decisions and reliable programming. A fair and equitable attitude resolves many disputes, discrepancies and changed conditions which arise during construction. Gransberg *et al.* (1999) also found that a number of liquidated damages were imposed on the partnered projects than the non-partnered ones.

2.8.4 Better quality product

Partnering produces high quality construction and service and reduces engineering rework (CII, 1991; Li *et al.*, 2001). An effective partnering agreement improves project quality by replacing the potentially adversarial traditional relationship and case building with an atmosphere that fosters a team approach to achieve a set of common goals researchers further explained that the partnering process facilitates communication of quality issues, enables earlier recognition of potential problems, and helps develop a quality consciousness.

2.8.6 Closer relationships

The close working relationship between the owner, constructor, and engineer provided a better environment of project (Cheng and Li, 2001a). Enhanced communication, the identification of shared goals and objectives, recognition that problems arose, and the agreement to address those problems through a special design procedure facilitated a harmonious relationship (CII, 1991).

2.8.7 Non-adversarial attitude

The traditional adversarial relationship between owner and contractor is stressful and inefficient (Cowan *et al.*, 1992). Partnering aims to reduce adversarial relationship that will allow focus on mutual goals to the benefit of both parties (CII, 1991). The transforming adversarial relationship is the actual change mechanism that transfers usual business into a trust based relationship.

2.8.8 High level of mutual trust

Partnering recognizes an implied covenant of good-faith dealing by all parties involved (Harback *et al.*, 1994). Within this atmosphere of cooperation and mutual trust, the parties can jointly determine and evaluate approaches to design, engineer, and construct the project and result in improving cost and schedule performance (CII, 1991).

2.8.9 Risk and resources sharing

Partnering enables parties to share the benefits and resources collectively and develop management and technical advances jointly (Moore *et al.*, 1992). It also establishes the tools for both measurement and sharing of gains and risks.

2.8.10 Better responsiveness to problems

Partnering helps actualize the delegation of authority or empowerment to the project personnel. The flexibility and responsiveness of the owner increase under the partnering

agreement. It ensures problem solving at the lowest possible level of authority. A partner can be more responsive to short-term emergency, changing project or business needs (CII, 1991).

2.8.11 Enhanced communication

The urgency to break the traditional hierarchical communication channels partnering promotes openness, trust and efficient communication through common and alleviative language (CII, 1991). Increased communication on various subjects means that the parties are less likely to be surprised by schedule delays and additional costs, which often lead to disputes and litigation.

2.8.12 Potential for innovation

An effective partnering relationship encourages partners to evaluate advanced technology for its applicability. Proper use of innovation through open communication improves design and construction processes (Bennet and Jayes, 2008).

2.8.13 Lower administrative cost

Partnering provides a way to lower administrative cost by eliminating defensive case building (Moore et al., 1992). Moreover, the cost to negotiate and administer contracts is decreased as partners become knowledgeable of the counterpart's legal and litigation concerns (CII, 1991). Cowan *et al.*, (1992) suggested other interesting benefits that partnering reduces paperwork and simplifies administrative procedure. Matthews, et al. (1996) advocated that less paperwork and more face-to-face discussions were made possible in partnered projects.

2.8.14 Better safety performance

Taking joint responsibility to ensure a safe working environment for all parties reduces the risk of hazardous working conditions and avoids workplace accidents. Actually, the

safety performance can be improved as partners better understand each other and as the knowledge of construction process and systems improves drastically (Moore *et al.*, 1992).

2.8.15 Increases better job satisfaction

Partnering provides a more conducive environment of achieving project objectives (Matthews *et al.*, 1996). All parties involved benefit from the partnering agreement. Partnering enhances customer satisfaction as the customer is closer to the construction process and better informed. Contractors obtain a reasonable profit and are assured of continued work at predetermined profit margins. Job satisfaction of all shareholders is possible. The work becomes enjoyable rather than a burden or an unreasonable risk. The project team members include the contractors, suppliers, and designers have higher levels of satisfaction and necessary actions are taken much sooner based on their active input.

2.8.16 Improves working culture

Chan *et al* (2002) indicated that evaluations of Army partnering contracts had shown a distinct improvement in the culture of the people working on the contract. When people work in a conflict-free environment, they concentrate on the job rather than on potential claims, and the morale and effectiveness of the whole 'team' is improved.

2.9 Benefits of Partnering that Addresses the Limitation of Current Practice

According to Ibrahim (2005) partnering addresses the above shortcomings of conventional contracting methods in construction industry by:

- 1 Identifying, selecting and involving all the key contractors (and sometimes vendors of major equipment) at an early stage of the project development,

- 2 Affording contractors a genuine opportunity to work together and with the owner to :
- i. design and define the most appropriate and economic project
 - ii. jointly develop estimates and project schedules before the owner gives final approval to proceed with the project
 - iii. identify all the risks associated with the project and design management, and mitigation measures for these
 - iv. Clarify and define the specific responsibilities and accountabilities of each of the participants and the interfaces between them.
 - v. Creating commercial alignment by giving the contractors a direct financial stake in the efficient design and execution of the project via an incentive scheme that is based on criteria directly linked to the overall outcomes.

2.10 Partnering Benefits

The majority of literature on partnering suggests that it can provide the basis for participants to reorient themselves towards a win-win approach to problem solving, meeting challenges, and moving towards shared goals where all project stakeholders benefit from the results. The benefits of partnering can be classified into two broad categories; tangible and intangible benefits (Russell, 1997).

2.10.1 Tangible benefits

These are clear which are directly measurable. For example, partnering has been reported to lower risk of cost overruns and delays as a result of better time and cost control over the project (Cowan *et al.*, 1992; Moore *et al.*, 1992; Gransberg *et al.*, 1999; Black *et al.*, 2000). Weston and Gibson (1993) compared 16 partnered and 29 non-partnered projects (averaging about \$10million) by US Army Corps of Engineers and found that there was a 9% improvement in cost and 8% improvement in time on the partnered projects.

2.10.1.1 An outline of the tangible benefits

Usually linked to contract elements (*e.g.* time, budget, quality, conflict resolution and safety):

- 1 Completes projects on time and within budget,
- 2 Improves quality performance,
- 3 Enhances efficiency and cost effectiveness,
- 4 Produces substantial value engineering savings,
- 5 Reduces paperwork,
- 6 Lowers claims and expedites early resolution of disputes with almost no need to resort to litigation,
- 7 Resolves equitable adjustment claims at the project level, and
- 8 Improves safety with no lost-time accidents and increases productivity.

2.11 Outline of the Intangible Benefits

These are the benefits which either cannot be measured, are difficult to measure with precision or are not directly measurable, but which are likely or may contribute to achieving future tangible benefits. For example, Abudayyeh (1994) posited that because of open communications and existence of trust among project participants, partnering has resulted in increased opportunity for innovation, especially in the development of value engineering changes and constructability improvement. Scott (2001) articulated intangible benefits reported by owners, contractors and their personnel involved in partnered projects to include:

- 1 enhanced practices, processes and procedures that are transferable to future projects,
- 2 rationalised and streamlined project procedures have led to a simpler organisation and reduced resource requirement,

- 3 employees have learned communication skills and problem-solving mechanisms which will be of help in their future work,
- 4 learning from partnering has improved overall company competitiveness,
- 5 employees are more motivated and more focussed on performance improvement,
- 6 employees are much happier in their work,
- 7 the creation of an environment where skills, expertise and knowledge are valued has allowed individuals at all levels to make positive contribution and to achieve self-development,
- 8 the company reputation and profile has been enhanced,
- 9 the development of a longer term business relationship from an initial one-off partnering, and
- 10 a much better understanding has been achieved of the totality of the risks associated with projects and how to manage these more effectively.

2.11.1 An outline of the intangible benefits

Usually linked to human interaction (*e.g.* trust, communication, respect, recognition and integrity):

- 1 Improves relationships on the job by nurturing a synergistic bond of cooperation and teamwork,
- 2 Creates an atmosphere for better open communication,
- 3 Builds trust,
- 4 Eliminates surprise,
- 5 Encourages empowerment to anticipate, surface and resolve problems,
- 6 Sets a higher degree of appreciation, recognition and respect among project participants,

- 7 Establishes a better working environment,
- 8 Provides more innovative and creative solutions to problems,
- 9 Increases customer satisfaction,
- 10 Enhances business reputation might be earned on a lump-sum contract, but benefits by being insulated from loss and, most importantly, the prospect of performing future work for that owner. The owner gets a contractor, whose learning curve increases from project to project, making for greater efficiency and lower overall costs when it uses the contractor for future projects.

2.12 Potential Barriers to Partnering Adoption

According to Ibrahim (2005) it is important to note that partnering cannot solve all the problems in the construction industry as it is only a management technique, and its success is totally dependent on the people who drive it. Scott (2001) broadly observed that most of the barriers can be viewed as being primarily self-imposed and resulting from the way in which organisations are structured and the ways in which they have been used to conducting business. The broad areas include:

- 1 organisational formulation
- 2 status cu attitudes
- 3 best partner fit
- 4 Financial concerns
- 5 Client experience/ skills
- 6 legal considerations

2.12.1 Organisational formulations

Many organisations have adopted the structure of a military hierarchy with many tiers of command, each level of management being responsible for a small number of

subordinates. Although this model evolved in the construction in order to promote efficiency, it has often resulted in communication restraints imposed by contractual conditions, especially in dynamic and multi-party environment that are necessary to realise a project. Hierarchies also promote a culture of formulating responsibility and accountability upwards, and are not suitable for the realisation of major projects in the short time frames that the economic environment demands.

The development of matrix organisations overcame many of the limitations of the pure hierarchy. Matrix organisations work with task forces led by a project manager, who draws on resources (such as suitably skilled staff) supplied by department. Once assigned to a project, the staffs are controlled by the project manager, who is the person accountable for the results of the project team. Since in partnering the aim is to form an overall task force organisation (the single integrated project team) which is led by a project manager, the individual project managers from the different partner organisations take direct accountability for their scopes of work.

2.12.2 Cross cultural attitudes

Organisations develop cultures over time that give common meaning to life in the workplace. These cultures define the pattern to which individual human behaviour conforms in a particular environment. Culture is conditioned by the environment within which relationships are conducted, and is modified by the accumulated experience and attitude of individuals. But since by definition, partnering will bring together organisations with different cultures, specific actions will have to be taken to surmount cultural barriers. One way to achieve this is to create a project culture that is separate from the cultures of any one of the organisational cultures represented. A starting point

may be the creation of a separate identity for the project that all team members can align behind (Wilson et al., 1995).

Specific cultural characteristics that may be a barrier to effective partnering are described below. For each, an approach to overcome the impact of the characteristic is offered and ways in which specific features of partnering can assist are also noted where appropriate.

2.12.2.1. Little low-level empowerment

In traditional hierarchies, because power is normally restricted to the higher levels of organisations, this has limited the speed of decision making and promoted a culture of buck-passing. This means that there is little attempt at resolving problems at the level where they are first recognised.

Emphasising the importance of individual contributions is essential in the early days of the partnering. The use of financial incentive scheme and the search for better ways of doing things (innovation) reinforce each other.

2.12.2.2 Little peer group contact

Due to the elevation of decision-making in conventional contracts, there has been little value attached to working level relationships between parties. Working methods have been primarily transaction-based, defined by the contract in force with little incentive for peer group contact.

The use of single integrated project management team with responsibility for the total project, supported by a partnering board of senior managers whose organisations have a direct financial stake, will help ensure that different ways of working are compared and the most suitable one for the job in hand selected.

2.12.2.3 Blaming not sharing

The commercial environment in conventional contracts has encouraged the automatic blaming of problems on others and the withholding of cooperation for fear of the assumption of legal responsibility. This has usually delayed solutions and made them more costly.

The financial incentive scheme mechanism of partnering removes the commercial pressure to leave blame with someone else and keeps attention on solving the problem. Commercial risk is taken jointly by the owner and the partners, and it is in everyone's interest that problems are solved for the lowest cost; it is of secondary interest which partner pays for it.

2.12.2.4 Reluctance to communicate freely

In conventional contracts, individuals tend to feel that communicating freely; especially across organisational boundaries will expose them to unwanted responsibility or personal risk. An atmosphere of 'no comments' develops when problems are discussed. Also, early knowledge of problems is withheld, either for fear of exposing 'failings' or, alternatively, in hope that somehow the problem will be resolved without anyone else ever getting to know about it. This lack of free communication can foster an adversarial attitude (Cook and Hancher, 1990).

The generation of an open project environment, where communication from the leadership is direct to all team members rather than cascaded through a hierarchy, will tend to unlock people's reluctance to communicate.

2.12.2.5 Lack of real commitment

The traditional working environment in conventional contracts does not encourage a commitment to improvement. At the lower levels of the organisations there is almost

always a suspicion that management is not really committed to change and, as a consequence, the individual may be exposed to criticism and risk if he attempts to initiate improvements. At the upper levels of management there are often tendencies to dismiss the possibility that individuals at lower levels have anything really worthwhile to contribute. This will be readily evident to those at the lower levels and will adversely impact on their level of commitment (Wilson et al., 1995).

In partnering, the personal commitment of team members is vital to project success as there can only be a joint success or failure, both at individual and at the corporate levels. This is heavily dependent on the commitment of the senior managers. The commercial alignment mechanism helps ensure that there is an incentive to encourage ideas for performance improvements from all levels.

2.12.2.6 Ingrained distrust

The traditional working environment in conventional contracts encourages an atmosphere of distrust about each other's motives between the owner and contractor staff and this militates against cooperation in dealing with issues.

This problem can only be addressed by the giving of trust to other parties in the belief that it will not be abused.

2.12.2.7 Investment in inappropriate skills

The traditional adversarial environment in conventional contracts has promoted the development of special skills in dealing with issues on a contractual basis. Certain key members of both owner's and contractor's staff have built up an expertise they wouldn't want to see devalued, and thus change would be viewed as a threat to personal job security and is resisted. According to Pinto and Steven, (1987) States that partnering will require adjustment for some people that is certain individuals will have to identify a new

role for themselves or accept that this new approach is not for them. The policing role of the owner is also removed, as is the over-reliance on contractual relationships.

2.12.2.8 Avoidance of personal accountability

The traditional ways of doing business provides a measure of collective security which could be disturbed by adopting change as there is a natural reluctance to be the first to stick one's head above the wall.

Emphasis on no-blame culture in partnering is necessary to change people's mind-set. Once this is recognised to be real and the leadership behaves accordingly, the tendency will be for individuals to take accountability beyond their normal remit and focus on the contribution they can make to the overall result.

2.12.2.9 Rigid roles and procedures

Traditional methods of working have encouraged the development of rigidly defined roles and a collection of standard operating procedures. This has been a consequence of the hierarchical organisation.

The permission to challenge and concentrate on value streams under partnering approach is an important of the search for improved performance. Nonetheless, if people are being encouraged to innovate and yet have to adhere blindly to the owner's specifications and procedures, then the initiative will be short-lived.

2.12 3 Best Partner Fit

Best Partner fit can be viewed in relation to the cultural and strategic fit of the partners. With regard to cultural fit, a concern that may be present relates to the perceived difficulties of creating a successful alliance with companies from different countries, and hence cultures. However, evidence suggests that, while it will almost certainly be necessary to take account of cultural diversity and select partner with almost best fit to

partner, it need not be a barrier as there are examples of very successful partnering arrangements involving organisations from, for example, Europe and Asia, North and South America and different countries of Europe (Scott, 2001).

Strategic fit, on the other hand, is an issue that needs to be addressed because fundamentally partnering arrangements are formed to give strategic advantage. Strategic fit centres on the complementary nature of skills and assets and the business aspirations. Surveys have suggested that partner skills should not overlap (Scott, 2001). This view is consistent with academic literature, where partners strength is often seen to derive from the co-specialisation of skills and resources (Bresnen and Marshall, 2000; Kwan and Ofori, 2001). Competitive tension introduced by the inclusion of more than one party offering comparable skills or services has the possibility of destroying the creation of effective relationships.

2.12.4 Financial Concerns

Most typical partnering models use a financial incentive scheme as the financial alignment mechanism, with a target cost usually being one of the principal criteria. At the same time, they are based on selecting contractors before the projects are fully defined. The usual and understandable initial reaction of an owner is that this leaves him commercially exposed because of the questions about the competitiveness of the target cost and the fear the contractors would have set the figures so high so that they finish up with excessive projects (Harback *et al.*, 1994).

But the contractors also have genuine issues to worry about such as the risk of difficulty of achieving the target cost and reliance on other parties to be open and 'honest'.

2.12.5 Client skills/Experience

Construction owners may be reluctant to embrace partnering , either because they do not have project management skills within their own organisation or, even when they do, because they perceive there is lack of people within their organisation that have been exposed to this approach. This will hinder the confidence in developing a partnering model that will take care of both their project management and commercial concerns. However, these deficiencies can be overcome by supplementing the client's organisations through the judicious use of consultants who have direct and relevant contract and project management experience of setting up partnering arrangements. The relationship can also be supported by other consulting organisations that specialise in the facilitation of behavioural and cultural aspects of partnering and in high performance team building. The 'independence' of such consultants is an important part of their ability to be effective. For example, it is recommended that such consultants should not have any financial interest in the incentive scheme.

As the concept becomes more widely practiced and more knowledge is disseminated, the lack of owner skills should become less of an issue.

2.12.5 Legal Motives

Public authorities are accountable for spending taxpayer's money and are required to take on open and transparent competition in procurement of works and services. Historically, the award of contracts in Nigeria has been perceived as lacking transparency in an environment affiliated with inflated costs, and closed and discretionary processes (National Planning Commission (NPC, 2004). But, the current government is already transforming the process by which private companies bid for government contracts in order to prevent the continuing nepotism, favouritism, and corruption which had

besieged the award of public contracts. It established the Budget Monitoring and Price Intelligence Unit (BMPIU) to review, oversee, and certify government contracts to ensure value for money. Commonly known as “due process”, this mechanism has already saved the Treasury hundreds of millions of naira (NPC, 2004). Although the current national procurement policy suggests emphasis on lowest bid, it prohibits agreements that prevents, restrict, or distort competition, or which amount to abuse of a dominant position in the relevant market. The certification mechanism used by the BMPIU allows only public projects that have passed the test for proper packaging and value for money to proceed (Ibrahim, 2005; Aladeloba, 2012).

Many people who are new to the concept of partnering are initially concerned that implementing it will contravene legislative provisions especially in respect of competitive selection of contractors for public sector projects. But it can be inferred from the current reforms that with regard to competitive selection of contractors in particular, it is clear that companies can be selected on best economic value criteria and that this does not limit selection to consideration only to bid price, thereby fulfilling the requirements for partnering arrangements.

2.13 Why Adopt Project Partnering in Nigeria?

Concepts and philosophies are tied toward improvement most especially when tested. The primary aims of these improvements are to enhance specific targets such as better quality, minimum cost, fast schedules, e.t.c. The adoption of partnering is geared towards improving relationship based problems which are inherent in the Nigerian construction industry. According to Ibrahim (2005) the limitations of the traditional procurement methods had paved way to seeking of better ways to control the situation. He further

highlighted that partnering has been for ages and had been in different forms and had been practiced in various circumstances.

The following key considerations were identified by the European Construction Institute for public sector Client:

1. Value for Money
2. Risk management improvement
3. Risk Transparency and improvement
4. Less confrontation
5. Greater continuous improvement

2.13.1. Value for money; projects such as oil explorations and building facilities had first been explored by multinational oil companies. A collaboration is usually signed by the federal government of Nigeria as the client to explore oil and enhance refineries and other oil facilities that support the production in Nigeria during the early 60s. Nigeria can take over the facilities after a number of years. Currently Nigeria is having value for money because it can now produce and export the oil internationally.

2.13.2 Risk Management improvement; Oil spillage has been a major treat in the Niger delta Regions. The Multinational oil companies usually collaborate with the local contractors in Nigeria who usually located around the region to assist in the clean ups of oil spillage in the region. Most contractor are usually afraid to venture in the region. However to improve in risk management collaboration is the key.

2.13.3 Transparency and improvement

Community and social development projects are usually carried out in some states like, Katsina and Kaduna, to provide projects for the local communities the World Bank and the state government collaborate in the funding of the projects with loan agreement with the

World Bank. The interested communities are required to provide 10 percent of the total project cost. Before the project commence the communities' representatives and the state government work hand in hand to enlighten the various commitments to the project. Transparency is the key which usually put trust in the communities that the government care for their infrastructure and development.

Table 2.1 Findings from the review of critical success factors, barriers and benefits of partnering literature.

Article	Theme	Type of study	Duration	Partners
Black <i>et al.</i> (2000)	CSFs and benefits	Survey	Project and strategic	Client – contractor/client – consultant/contractor-sub contractor
Bresnen and Marshall (2000)	Problems and dilemmas of partnering	Literature review	Project and strategic	Client–contractor
Bresnen and Chan <i>et al.</i> (2002)	Partnering benefits	Survey	Project	Client, consultant, contractor, sub-contractor, construction managers and suppliers
Bresnen and Chan <i>et al.</i> (2003)	Factors encouraging and inhibiting partnering	Case study	Project even if long term orientation is recognised	Client and contractor
Chan <i>et al.</i> (2003a)	Partnering benefits	Survey	Project	Client, consultant, contractor
Chan <i>et al.</i> (2003b)	Implementation barriers	Survey	Project	Client, consultant, contractor
Chan <i>et al.</i> (2004)	Critical success factors of partnering	Survey	Project	Client, consultant, contractor, sub-contractor
Chan <i>et al.</i> (2008)	Incentives and partnering success	Case study and document analysis	Project	Client–main contractor :
Chen and Chen (2007)	Critical success factors of partnering	Survey	Project	Owner, designers, engineers, contractors, sub- contractors
Cheng <i>et al.</i> (2000)	Critical success factors of partnering	Case study	Strategic	: Client, consultant, designer, contractor, sub- contractor
Cheng and Li (2001)	Partnering process and Critical success factors of partnering	Survey	Project and strategic	Not Specified
Cheng and Li (2002)	Partnering process and Critical success factors of partnering	Survey	Project and strategic	Not Specified
Eriksson <i>et al.</i> (2008)	Barriers to partnering	Survey	Project and strategic	Client–contractor
Gransberg and Reynolds (1999)	Measuring partnering performance	Survey	Project	Client–contractor
Humphreys <i>et al.</i> (2003)	From adversarial to collaborative relationships	Case study	Project and strategic	Contractor– subcontractor
Jacobson and Choi (2008)	Success factors for public-private partnerships	Qualitative study	Project	public–private entities
Jones and - Kaluarachchi (2007)	Factors affecting strategic partnering	Case study and quantitative measures	Strategic	Client(consortium)– contractor - charter.
Larson (1997)	Partnering and project success	Survey	Project	Owner–contractor
Lu and Yan (2007)	Incentives of partnering	Survey	Project	Not specified

Ng <i>et al.</i> (2003)	Problem issues of partnering	Case study	Project	Client–contractor relationship in focus
Tang <i>et al.</i> (2006)	Partnering mechanisms and CSF	Survey	Project	Client–contractor
Wong <i>et al.</i> (2005)	Factors and drivers of trust	Survey	Project :	Client/consultant– contractor
Wood and Ellis (2005)	Benefits of partnering Survey		Project	Client–contractor/ contractor–subcontractor

Source; Bygballe et al. (2010)

Table 2.1 indicates a review of relevant literature of partnering in respect to the critical success factors, benefits and problems.

A total of 23 articles were extracted from recent publications .The publications are categorised in terms of authors, description or them, types of study, duration, and types of partners involved.

12.18 A brief description of 14 potential factors affecting project partnering success.

Factor	Description
Adequate resources	Partnering requires the contribution of all parties. Each involved party supplies adequate resources to share with other members in a partnering relationship, which are enough to support a successful partnering (Crowley & Karim, 1995).
Top management support	As senior management formulates the strategy and direction of business activities, their full support and commitment is vital for partnering success (Cowan <i>et. al.</i> , 1992).
Partnering arrangement	Whenever construction parties agree to establish an informal partnering, an agreement is formed. A list of targets, goals, and objectives are usually stated which are aimed to be achieved by all agreed parties (Cowan, 1991).
Team building	Team building is the formation of a partnering team that consists of members from all involved parties where these representatives should be key executives and possess the authority to act on behalf of their organizations.
Problem solving	Joint problem solving is a collective decision made by the partnering team to create alternatives for problematic issues, including conflicts, disputes and claims (Cheng <i>et. al.</i> , 2001).

Facilitator	Facilitator possesses strong partnering and construction background hired for a partnering team externally to facilitate the formation of partnering.
Open communication	Open communication in partnering refers to the free flow of resources in terms of ideas, knowledge, information, skills and technology through different effective channels (Cheng <i>et. al.</i> , 2000).
Effective co-ordination	Co-ordination in partnering is the perception of one party towards the expectation of other parties on it in fulfilling a set of tasks (Chan <i>et al.</i> , 2004).
Innovation	Creativity refers to the ability to generate new ideas. In search of break through opportunities to leap forward so that performance can be greatly enhanced to a creative process (Lazar, 2000).
Commitment	Long-term commitment to partnering is the extent of the willingness of one party to maintain the current partnering relationship with other parties to avoid unanticipated problems based on some positive aspects. Commitment is crucial in partnering (Lazar, 2000).
Mutual trust	Pruitt (1981) referred to trust as the belief of both parties on each other that it is reliable in fulfilling its obligation in an exchange relationship. Lazar (2000) has studied trust for project partnering and concluded that trust can grow over time, emerge spontaneously and pre-exist.

Continuous improvement	Continuous improvement is a long-term change process. It is defined as an organization-wide process of focused and on-going increasing ways of innovation in the future.
Learning environment	Learning is a means to achieve competitive advantage. How to benchmark the best practices and motivate employees to learn become common strategies of organizations.
Partnering expertise	Experience is accumulated to become some new knowledge or skills or custom of practice that one has developed because of one's previous participation in some partnering events.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Preamble

This research was pursued through a field work. The Field work entails the use of the questionnaire administered to the respondents to establish their opinion on the Critical Success Factors (CSF) Of Project Partnering towards Its Adoption in the Nigerian Construction Industry

3.2 Method of Data Collection

The survey based - method is commonly used by researchers. It includes the distribution of structured questionnaire (Naoum, 2001). Survey design gives a quantitative description of conditions such as attitudes and perceptions of the populations. Both the quantitative and qualitative data were used for a comprehensive study.

For the purpose of this work, the primary data was obtained through field survey, using a structured questionnaire. While secondary data was obtained from books, journal, magazine, conference / seminar papers will be utilized. The questionnaires were used for data collection and were administered to various professional in the construction industry broadly categorized into the three as the client, contractor, and consultant respectively.

3.3 Population and Sample of the Study

Best and Khan (1989) define population as "any group of individuals that have one or more characteristics in common that are of interest to the researcher". In view of this, the population for the study are the stakeholders and also construction professionals majorly responsible for public building projects delivery in Nigeria. They include professionals involved in the Nigerian Construction Industry irrespective of the fact that they can belong to any of the following Categories: clients, consultants and contractors. This categorization

was to ensure that all information obtained from the structured questionnaires guarantee a reasonable level of validity to achieving the aim of this research work

Similarly, owing to the wide range of population and the fact that there are no exact records to the number of this professionals in the three State under Study, the Sample population is presumed to be unknown and as such the sampling size was be determined based on the formula below considering the fact that the targeted population is unknown

$$n = (z^2pq)/d^2 \dots\dots\dots (3.1)$$

Where;

n = the desired sample size

z = the ordinate on the Normal curve corresponding to α or the standard normal deviate, usually any of the following determined based on the ‘margin error formula’

- i. A 90% level of confidence has $\alpha = 0.10$ and critical value of $z_{\alpha/2} = 1.64$.
- ii. A 95% level of confidence has $\alpha = 0.05$ and critical value of $z_{\alpha/2} = 1.96$.
- iii. A 99% level of confidence has $\alpha = 0.01$ and critical value of $z_{\alpha/2} = 2.58$.
- iv. A 99.5% level of confidence has $\alpha = 0.005$ and critical value of $z_{\alpha/2} = 2.81$.

P = the proportion in the target population estimated to have particular characteristic (normal between the range of 0.1 - 0.5)

q = 1.0-p

d = degree of accuracy corresponding to the confidence level and Z selected.

For the purpose of this study, a confidence level of 95% was adopted owing to the fact that the questionnaire was geared towards evaluating perception of the respondents on construction project partnering.

Consequently, the sample size is determined as thus,

$$z = 1.96, d = 0.05 \text{ where } p = 0.9, q = 0.1$$

$$N = (1.96^2 \times 0.9 \times 0.1) / (0.05)^2 = 138$$

Therefore a total of hundred and forty project team members (respondents) were sampled in the area. The sampling technique to be adopted in the distribution of the questionnaires was done using random sampling technique.

3.4 Questionnaire Design

The design of a questionnaire has direct bearing on the kind of information that is obtained from the responses to the questions. The questionnaire for this thesis has been prepared according to the aim and objectives mentioned in chapter one. The findings from the review of literature and objectives of the study were applied to design a structured questionnaire meant to identify and appraise the potential CSFs and possible the adoption of Project partnering.

The questionnaire was design to be consistent with the CSF identified from literature and administered to the respondents within the study areas. The sought information in the following aspect in relation to the professional's opinion on adoption of project partnering in Nigeria:

- i. The personal profile of the respondents in relation to their knowledge on the trends and practices in the construction industry.

- ii. The professionals validation that the Critical Success Factors (CSF) identified from literatures are applicable the Nigerian Construction Industry.
- iii. Professionals ranking of the Critical Success Factors as a tool in Project partnering in Nigerian Construction industry.
- iv. An assessment of the benefits of Project partnering in the Construction Industry
- v. Ranking of the barriers to Project Partnering in Nigeria.

(See 'Appendix I' for the complete questionnaire).

3.5 Questionnaire Administration

Data were collected with the aid of structured questionnaires which the respondents organisations in Abuja, Kaduna and Katsina. These locations were chosen because most of the clients (Public Institutions), just like the consultants and the contractors, are located in the north central. The targeted respondents of the questionnaire were the executive or senior management staff of the organisations; this is necessary because they are in the right position to have adequate information regarding their organisations' policies on adopting project partnering. The questionnaires were delivered and retrieved by hand. A total of 140 self-administered questionnaires were distributed to respondents in the target population, 98 were returned and found appropriate for the analysis.

3.6 Method of Analysis and Data Presentation.

In the analysis of data to be obtained in the study, both descriptive and referential data analysis will be adopted. Bar Charts, Pie Charts, Tables, means, percentages and the charts will be used to express the statistical results. Charts like bar and Pie charts will also be used to present results. Suitable statistical tools were adopted in the analysis. The Statistical Package for Social Sciences (SPSS) software was used to analyse the data using

descriptive statistics Relative importance index will also be used in the study to assess the results.

$$\text{Relative importance index. (RII)} = \frac{\sum fx}{\sum f} \times \frac{1}{k} \dots\dots\dots(3.2)$$

Where,

$\sum fx$ = is the total weight given to each attributes by the respondents

$\sum f$ = is the total number or respondents in the sample

K = is the highest weight on the Likert scale.

Ranking of the items under consideration will base on their RII values. The item with the highest RII value will be ranked first (1) the next (2) and so on. The interpretation of the RII values is achieved when,

$RII < 0.60$, item is assessed to have low rating

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

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

Also using mean for the interpretation their extent of prevalence as either low, moderate or high based on the following boundaries (level of measurement) developed by Ruikar *et al.*, (2006):

- a) a mean rating with value $0.00 < x < 2.50$ is considered “Low”
- b) a mean rating with value $2.50 < x < 3.50$ is considered 'Moderate'; and
- c) a mean rating with value $3.50 < x < 5.00$ is considered 'High'.

CHAPTER FOUR

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1 Preamble

This section encompasses the presentation of the data, analysis of the data and the discussion of the data gotten from the questionnaire survey. As mentioned in chapter three a total number of 140 questionnaires were administered to construction professionals who are also involved in partnering organisations in the

4.2 Percentage Response

A total of one hundred and forty questionnaires were administered to various respondents within the areas of study. The percentages of responses are presented in Table 4.1. From the Table it can be gathered that a total of ninety-eight (98) questionnaires were received adequately filled giving a percentage response of 70.0%.

Table 4.1 Questionnaire Administered

Questionnaires	Frequency	Percentage of (%)
Number returned	98	70.0
Numbers not returned	42	30.0
Total	140	100

Source: Field Survey, (2015)

4.3 Respondents Profile

The entire respondents profile is as presented in Table 4.2. However, breakdowns of the major component of the Table are further presented with the Chart in Fig 4.2- Fig 4.6 for Clarity.

Table 4.2 Respondents Profile

S/N	Variable	Option	Frequency (No)	Percentage (%)
1	Respondents Professions	a) Architects	23	23.5
		b) Builders	41	41.8
		c) Engineers	22	22.5
		d) Quantity Surveyors	12	12.2
		e) Others	-	-
		Total	98	100
2	Distribution of Respondents Organization	a. Client	44	44.9
		b. Consultant	23	23.5
		c. Contractor	31	31.6
		Total	98	100
3	Highest Qualification Obtained	a) HND	23	23.5
		b) Bachelors Degree	24	24.5
		c) Post Graduate Diploma	12	12.2
		d) Master Degree	28	28.6
		e) Doctorate	11	11.2
		Total	98	100
4	Professionals Registration Status	a) Graduate Member	34	35.0
		b) Corporate Member	25	25.0
		c) Associate Member	23	23.0
		d) Fellow Member	16	17.0
		Total	98	100
5	Duration of work in the construction industry.	a) 0-5years	3	3.4
		b) 6-10years	9	9.3
		c) 11-15years	10	10.2
		d) 16-20years	16	16.3
		e) 21-25years	28	28.2
		f) Above 25years	32	32.6
		Total	98	100

Source: Field Survey, (2015)

4.3.1 Respondents Professions

Fig 4.2 shows the bar chart distribution of respondents by nature of their professions in that 23.5% of the respondents were Architects, while 41.8% were Builders, while 22.5 % of the respondents are Mechanical and Electrical Engineers while 12.2% were as quantity surveyors.

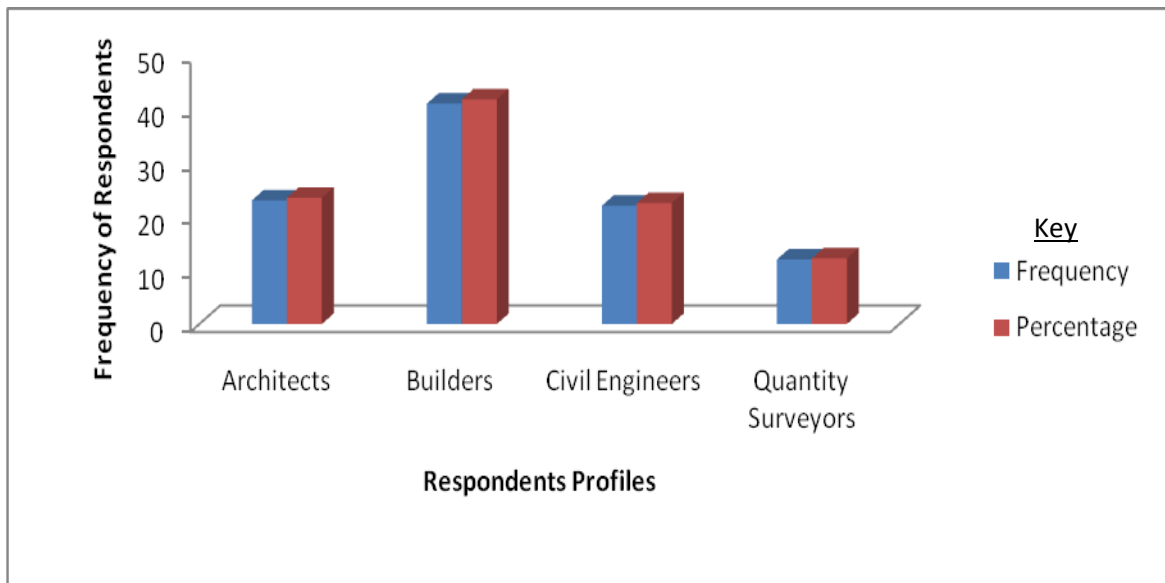


Fig 4.1 Respondents Professional Profiles

Source; Field Survey, 2015.

4.3.2 Respondent Categories on the type of Organization

From Fig 4.3, the bar chart distribution indicates that 44.9% of the respondents are clients, while 23.5% of the respondent where consultants while 31.6% of the respondent where contractor organisations respectively.

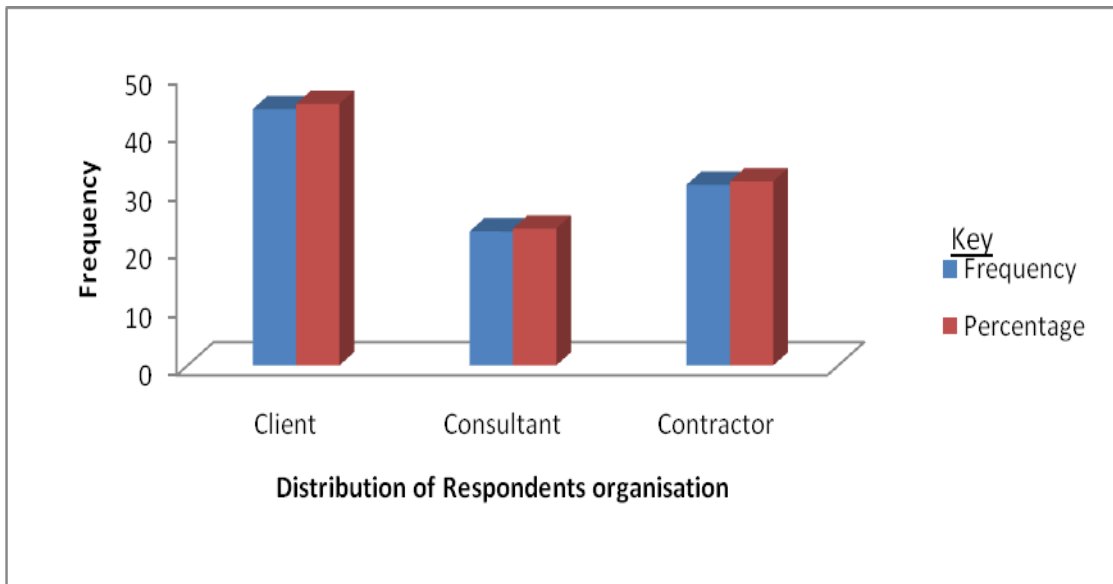


Fig. 4.2 Distribution of respondents by the type of organisation.

Source; *Field Survey, 2015.*

4.3.3 Respondents Highest Qualification

Fig. 4.3 Shows the distribution of respondents in terms of their highest qualifications, each indicates their various highest academic qualifications , Higher National Diploma has 23.5%, Bachelor of Science 24.5% , Post graduate diploma 12.2 % , Masters , with 28.6% while the Doctorates i.e Ph.D. have 11.2% respectively..

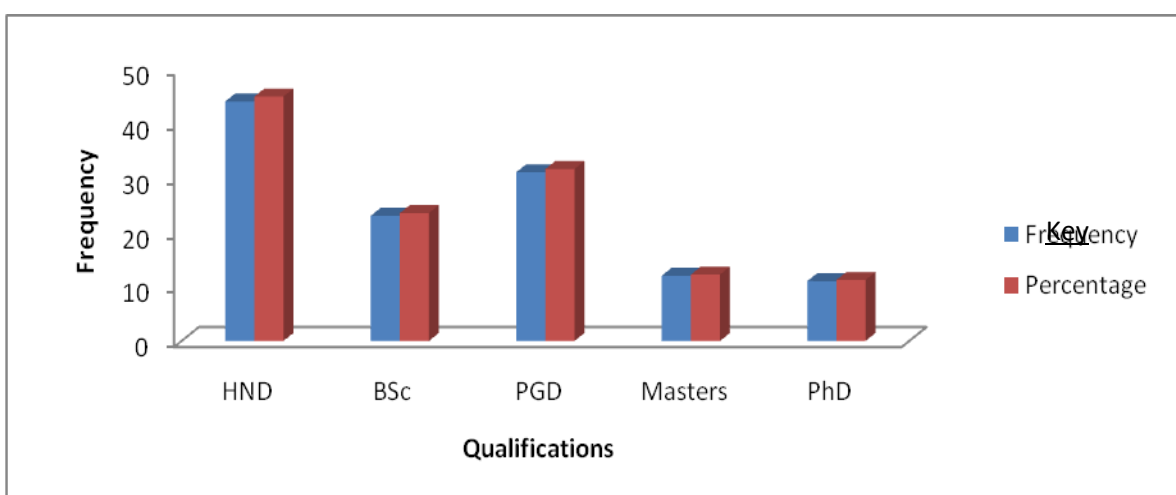


Fig 4.3 Highest qualification obtained

Source; *Field Survey, 2015.*

4.3.4 Respondents professional registration status

Fig 4.5 shows the frequency distribution and the percentages of the professionals, who are categorised based on their professional membership. Graduate members have 35.0 %, corporate members have 25.0% of the frequency, while associate and fellow members have 22.4% and 16.3% respectively. About 75% of the professional status was members from corporate to fellow members which indicate the extent of their various professionalism memberships.

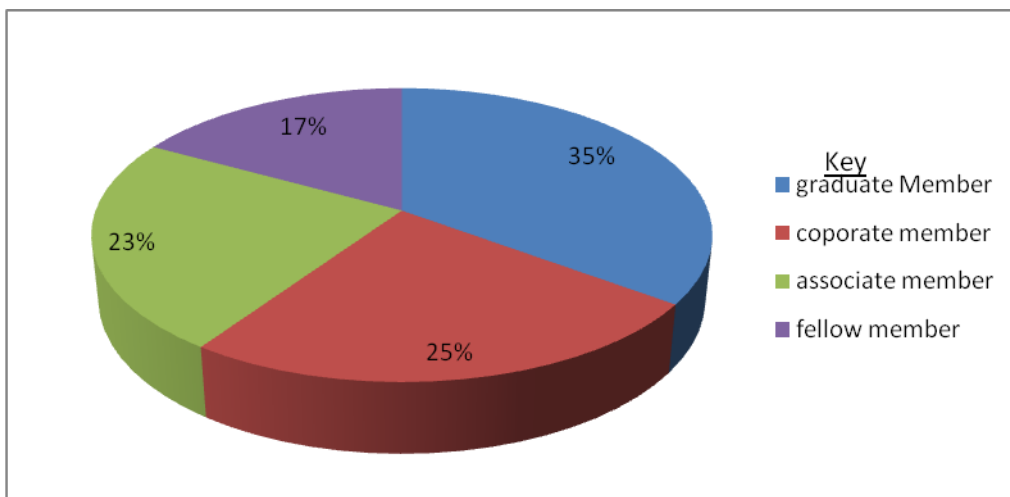


Fig. 4.4 Professional registration status
Source; Field Survey, 2015

4.3.5 Respondents working experience in the construction industry

Figure 4.6 indicates that 3 (3.4%) of the respondent had been practicing for less than 6 , while 9.3% of the respondent have been practicing between 6-10 years.10.2 % between 11-15 years, 16.3% who have been practicing between 16-20 years, 28.2% of the respondents practice between 21-25 years ,while, 32.6 % have been practicing for more than 25 years. Which indicates that about 77.6 % of the respondents are having a working

experience of more than 10 years could be considered experienced to provide a reliable data for the research.

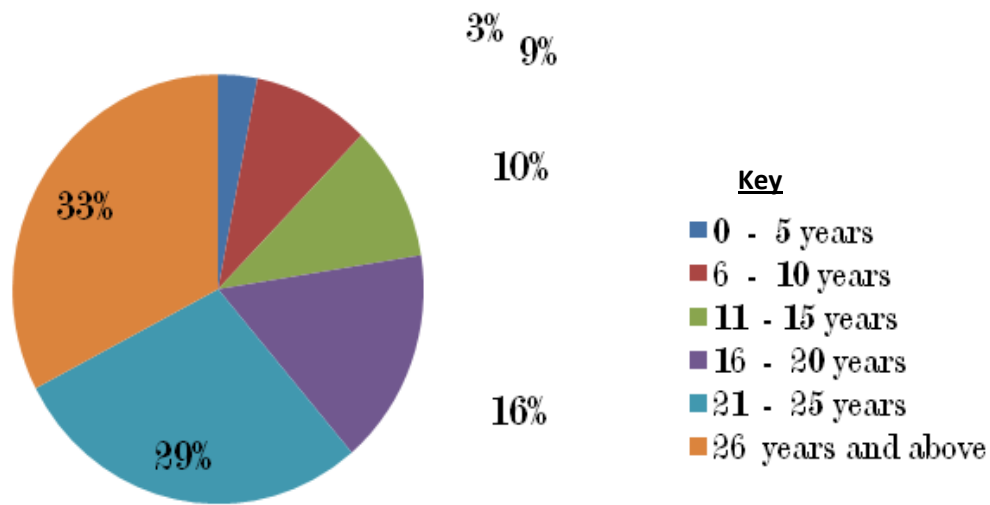


Fig 4.5 Distribution of respondents by number of years the organisation has been practicing.

Source; Field Survey, 2015.

4.4 Professionals Ranking of the Critical Success Factors as a Tool in Project Partnering In Nigerian Construction Industry

Table 4.3, presents the result of the analysis of the respondent ranking of the CSF as a tool in Project Partnering in Nigerian Construction Industry. From Table 4.3, it can be deduced that the respondents ranked ‘ Mutual trust among party members’ as a first major key player, ranked the highest with RII of 0.85, while ‘Top Management support’ was ranked second with the RII of 0.81 , Preventive conflict resolution strategy, team work and cooperation among party members and clear definition of responsibilities of party members were ranked third with the RII 0.80 .However it would be observed that the RII of 0.85, 0.81 and 0.80 are ranked as the highest among the critical success . The values indicate that their extent of prevalence is at highest level. Respondents also ranked the extent of prevalence of mutual trust among party members, top management support, and

team work and cooperation, clear definition of party members on responsibilities, conflict resolution strategy, are the prevalent critical success factors. Thus the Table represent the ranking of the CSF as a tool of Project partnering in there order of relevance and severity.

Also a closer look at the Values of the RII, shows that most of the CSF factors identified are pivotal for a successful Project partnering in the construction industry as their values are relatively above 0.6, however other factors like; ‘Clear definition of partnering objectives’ and ‘Integrity and respect among participants’ were the lease ranked, an indication that though they are also necessary but considering the peculiarity of the Nigerian construction industry are not as important as others.

Table 4.3 Critical Success Factors of Project Partnering

S/N	Critical Success factors of Project Partnering	Frequency of Respondents					N	RII	Rank
		1	2	3	4	5			
7	Mutual trust among party members	5	0	11	30	52	98	0.85	1 st
14	Top management support	2	2	24	33	37	98	0.81	2 nd
3	Team work and cooperation	1	1	33	27	36	98	0.80	3 rd
5	Clear definition of responsibilities of party members	0	1	34	25	38	98	0.80	3 rd
12	Preventive conflict resolution strategy	3	1	26	32	26	98	0.80	3 rd
11	Adequate resources/funds	3	2	32	35	35	98	0.78	4 th
13	Long term commitment	5	6	28	33	26	98	0.74	4 th
1	Open communication among participants	5	6	20	29	38	98	0.74	5 th
4	Risk sharing among participants	2	8	22	28	30	98	0.71	5 th
2	Ability to generate innovative ideas	0	9	31	37	26	98	0.69	6 th
8	Involvement of subcontractors and end users at early stage of the project	18	6	27	32	15	98	0.65	7 th
6	Clear definition of partnering objectives	31	2	28	6	25	98	0.56	8 th
9	Honesty among party members	21	11	36	27	3	98	0.56	8 th
10	Integrity and respect among participants	19	26	30	15	8	98	0.53	9 th

Note; 1= Strongly Disagree 2= Disagree 3= Somewhat Agree 4= Agree 5= Strongly Agree

Source: *Field Survey, 2015.*

4.5 Benefits of Project Partnering Projects in Nigeria.

The respondent's perception on the extent of the benefits of project partnering in Nigerian construction industry is represented in the table 4.4 below.

Table 4.4 Benefits of project partnering in Nigeria construction industry

S/N	Benefits of project partnering in Nigeria construction industry	Frequency of response					N	RII	Rank
		1	2	3	4	5			
4	Its establishes good team work relationship	0	19	15	28	36	98	0.81	1 st
12	It provides good conflict resolution strategy	12	26	38	5	17	98	0.80	2 nd
5	It enhances quality improvement of the project	0	20	19	27	32	98	0.74	3 rd
9	Mutual goals are shared among all participants.	3	16	18	32	28	98	0.74	3 rd
8	Enhances Construction project cost savings	5	16	23	26	28	98	0.71	4 th
13	It increases customer/client satisfaction	0	12	26	31	24	98	0.71	4 th
6	It enhances risk sharing among party members in the construction team	4	14	28	34	18	98	0.70	5 th
7	Effective communication among party members	9	11	20	36	22	98	0.70	5 th
10	It enhances improvement in design	2	21	23	30	22	98	0.70	5 th
11	Develop understanding among party members	6	19	28	36	10	98	0.66	6 th
1	It enhance reduction in budget cost	8	16	44	26	4	98	0.60	7 th
2	Early implementation of the construction project	11	24	31	27	5	98	0.58	8 th
14	It enhances facility maintenance	16	28	32	6	16	98	0.56	9 th
16	It reduces project risk	39	24	7	28	0	98	0.45	10 th
15	It encourages financing option	17	29	22	29	1	98	0.54	11 th
19	Honesty in accepting responsibility among participant	10	32	36	19	1	98	0.54	11 th
17	It enhances economic growth of the nation	10	31	41	15	1	98	0.53	12 th
24	Encourages continuous improvement	26	19	22	26	5	98	0.53	12 th
3	It speeds time of project completion	5	18	68	1	6	98	0.51	13 th
18	It involves the end users and subcontractors at the early stage of the project	33	26	13	26	0	98	0.47	14 th
21	All parties set to a win-win attitude	11	25	45	14	3	98	0.50	14 th
20	All parties are willing to eliminate waste and problems to improve	32	24	21	21	0	98	0.47	15 th
23	Provides Lower operational cost among party members	34	28	8	20	8	98	0.46	16 th
22	Reduction in cost variation	38	24	17	16	3	98	0.44	17 th

Note; 1= Strongly Disagree 2= Disagree 3= Somewhat Agree 4= Agree 5= Strongly Agree.

Source: Field Survey, 2015.

Table 4.4 shows twenty four possible benefits to the adoption of project partnering in Nigeria ranked in their order of severity. From the Table it can be deduced that the respondents ranked “It establish good team work relationship, (RII 0.81) as the first. This was followed closely by ‘It provides good conflict resolution strategy with RII rating of 0.80) as second, while ‘mutual goal are shared among party members’ (RII 0.74) was ranked third. A glance at the mean ranking indicates that most of the benefits identified are feasible with the Nigerian construction industry. However those with RII value less than 0.5 are considered to be inconsequential. The cumulative mean of 3.01 indicates that the overall extent of the prevalence benefits is at the moderate level.

4.6 Barriers of Project Partnering

Table 4.5 shows the seventeen possible barriers to the applicability of project partnering as ranked by the respondents. It can be deduced that the respondents ranked ‘adversarial relationships’ (RII of 0.92) as the first and highest barrier to project partnering in Nigeria. Similarly, ‘Misunderstanding of the concept’ (RII 0.90) was ranked the Second major barrier, while ‘distrust and inadequate involvement of key party members’ (RII 0.81) was ranked the third. A closer glance at the mean values of the entire factor identified shows that it is closer to 4.0, and indication that the factors are potential barriers to project partnering. However, from the respondents ranking it can also be deduced that ‘Lack of top management support’ is the least barrier identified as it is ranked the last. The cumulative mean of 3.34 indicates that the overall extent of the barriers prevalence is at the moderate level details of the ranking of other barriers identified are as shown in the Table 4.5.

Table 4.5 Barriers of Partnering Projects in Nigeria.

S/n	Barriers of project partnering	Frequency of response					N	mean	RII	Rank
		1	2	3	4	5				
14	Adversarial relationship	41	9	25	23	0	98	4.61	0.92	1 st
16	Misunderstanding of the concept	36	24	15	23	0	98	4.51	0.90	2 nd
4	Distrust	0	6	31	43	38	98	4.03	0.81	3 rd
8	Uneven commitment of participants	1	4	27	28	38	98	4.00	0.80	4 th
2	Inadequate effective communication	1	10	23	26	38	98	3.81	0.76	5 th
3	In adequate training and knowledge sharing among participants	0	15	34	18	31	98	3.61	0.72	6 th
7	Cultural and Ethnic differences	9	20	40	18	13	98	3.12	0.62	7 th
11	Insufficient problem solving strategy among participants	8	13	26	23	28	98	3.51	0.71	7 th
12	Insufficient effort by participant to keep partnering going	12	15	21	16	34	98	3.46	0.71	7 th
6	Over dependence on others	12	31	43	16	14	98	3.44	0.69	8 th
5	Failure of sharing risk	10	38	10	9	31	98	3.11	0.62	9 th
9	Corruption among member parties	26	18	7	41	6	98	2.83	0.57	10 th
10	Lack of continuous improvement	24	16	6	38	14	98	2.82	0.56	11 th
13	Inadequate involvement of key party members of partnering	11	36	29	14	8	98	2.71	0.54	12 th
15	Inadequate information sharing	16	34	27	18	3	98	2.57	0.51	13 th
1	Complacent relationship among participants	0	0	28	28	36	98	2.41	0.48	14 th
17	Lack of top management support	38	29	8	22	1	98	2.17	0.44	15 th

Note; 1= Strongly Disagree 2= Disagree 3= Somewhat Agree 4= Agree 5= Strongly Agree.

Source: Field Survey, 2015.

4.7 Comparison of the Perception of the Critical Success Factors of Project Partnering

Table 4.6 presents the perception of professional clients, consultants, and contractors on the ranking of the possible benefits of project partnering in Nigeria.

According to 44 clients organisation results the highest mean scores are 4.26, 4.03 and 4.02 respectively. They are ranked first, second and third the highest mean scores are mutual trust among party members, top management support, and clear definition of partnering objectives. While the moderate ranking means scores are 2.66 and 2.75 respectively which indicates that integrity and respect among participants and clear definition of partnering objectives were the moderate mean values of the perceived CSFs that falls between the range of $2.50 \leq x \leq 3.50$. Moreover, the cumulative mean of 3.56 falls within the range of $3.50 \leq x \leq 5.00$ which denotes a highest range.

According to 23 consultant organisations the highest mean values are 4.85, 4.80 and 3.81 respectively. Their respective rank among the group are first, second, and third indicates team work and cooperation , mutual trust among party members and top management support.

According to 31 contractor organisations the highest mean values are 3.95, 3.72 and 3.57 respectively. Their respective rank among the group are first, second, and third indicates top management support, Ability to generate ideas, and Adequate funds/resources. The lowest ranked mean are 2.56 and 2.53, which indicates that integrity and respect among participants and clear definition of partnering among party members have the lowest ranking values among the group. Moreover, the cumulative mean stands at 3.16 which indicates that the extent of prevalence is moderate because it falls between $2.50 \leq x \leq 3.50$.

Table 4.6 Comparison of the critical success factors of project partnering based on organisations

S/ N	Critical Success factors of Project Partnering	Client		Consultant		Contractor		All Respondents	
		Mea n	Ran k	Mea n	Ran k	Mea n	Ran k	Mea n	Ran k
3	Team work and cooperation	3.98	5	4.85	1	2.76	10	4.67	1
1	Open communication among participants	3.70	6	3.74	5	2.91	7	3.89	2
5	Clear definition of responsibilities of party members	4.02	3	3.80	4	2.53	13	3.89	2
14	Top management support	4.03	2	3.81	3	3.95	1	3.71	3
8	Involvement of subcontractors and end users at early stage of the project	3.26	10	3.65	8	3.26	5	3.56	4
7	Mutual trust among party members	4.26	1	4.80	2	3.07	6	3.55	5
11	Adequate resources/funds	3.40	8	2.78	13	3.57	3	3.53	6
9	Honesty among party members	2.80	11	3.56	9	2.78	9	3.05	7
4	Risk sharing among participants	3.53	7	3.71	7	2.86	8	3.01	8
10	Integrity and respect among participants	2.66	13	3.53	10	2.56	12	2.87	9
2	Ability to generate innovative ideas	3.44	9	2.69	14	3.72	2	2.65	10
13	Long term commitment	3.70	6	3.74	6	3.37	4	2.64	11
12	Preventive conflict resolution strategy	3.99	4	2.80	12	3.26	5	2.62	12
6	Clear definition of partnering objectives	2.74	12	3.56	11	2.64	11	2.51	13
	Number	44		23		31		98	
	Cumulative mean	3.56		3.64		3.16		3.23	
	Kendalls coefficient of concordance(W)	0.66		0.53		0.26		0.12	
		7		4		6		3	
	Level of significance	0.00		0.00		0.00		0.00	
		0		0		0		0	

Note; 1= Strongly Agree 2= Dis agree 3= Somewhat agree 4= Agree 5= Strongly Agree.

Source: *Field Survey, 2015.*

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Preamble

This chapter presents the summary of the finding, the conclusion reached based on the finding. It also presents the recommendation of the research work based on the conclusions reached as well as the contribution of this research work to to the body of knowledge.

5.2 Summary

Based on the objectives of the research stated in chapter one and major findings from the .so analysed (results), the following conclusions were made:

- 1 The survey result indicates that all stakeholders responded positively to the most important critical success factors for adoption in the Nigerian construction industry. The top three critical success factors of partnering are mutual trust among party members, Top Management support' was ranked second with the RII of 0.81, Preventive conflict resolution strategy, team work and cooperation among party members and clear definition of responsibilities of party members were ranked third with the RII 0.80. However it would be observed that the RII of 0.85, 0.81 and 0.80 are ranked as the highest among the critical success.
- 2 With regards to the benefits of project partnering adoption in the Nigerian construction industry, twenty four possible benefits outlined from literature. Respondents ranked 'It establishes good team work relationship', with mean rating of 4.05 and RII 0.81. 'It provides good conflict resolution strategy with a mean rating 3.99 and RII rating of 0.81, while mutual goal are shared among party members has a mean rating of 3.69 and RII of 0.74 as the top three most important

benefits of improving and adopting partnering in Nigeria. The study findings are in line with conclusion of the study conducted at Hong Kong by Chan (2003) and Sanders and Moore (1999)

- 3 Out of the seventeen possible barriers to the applicability of project partnering. Respondents ranked adversarial relationships with the mean rating of 4.61 and RII of 0.92, Misunderstanding of the concept, with the mean rating of 4.51 and RII 0.90, distrust and inadequate involvement of key party members with a mean rating of 4.03 and RII of 0.81 respectively. A closer glance at the mean ratings of these three factors that have 4.61, 4.51 and 4.03 respectively indicates their extent of prevalence of the barriers at highest. The study result is in line with similar study conducted by Ibrahim (2005); Chan *et al.* (2003b) and Faruk (2014).
- 4 With regards to client organisation the highest mean scores are mutual trust among party members, top management support, and clear definition of partnering objectives. While the moderate ranking means scores are 2.66 and 2.75 respectively which indicates that integrity and respect among participants and clear definition of partnering objectives.

According to 23 consultant organisations the highest mean values are 4.85, 4.80 and 3.81 respectively. Their respective rank among the group are first, second, and third indicates team work and cooperation , mutual trust among party members and top management support. While According to 31 contractor organisations the highest mean values are 3.95, 3.72 and 3.57 respectively. Their respective rank among the group are first, second, and third indicates top management support, Ability to generate ideas, and Adequate funds/resources.

However a comparative analysis of the three professional organisation in relation to the CSFs of partnering in Nigeria indicates that mutual trust among party members ,top management support , and clear definition of partnering objectives, Ability to generate ideas, and Adequate funds/resources ,team work and cooperation. The result is in agreement in the conclusion drawn in Ibrahim (2005), and Chan *et al.* (2004).

The results indicated by Chan *et al.* (2001) on the Critical success factors of partnering in Hong Kong, indicate that certain requirements must be met for partnering to succeed were ranked in descending order of importance. In particular, a willingness to share resources among project participants, a clear definition of responsibilities, a commitment to a win-win attitude, and regular monitoring of partnering process were believed to be the significant underlying factors for partnering success the establishment and communication of a conflict resolution strategy. The survey findings suggested the major barriers of partnering success to be “facing commercial pressure to compromise on the partnering attitude.” The results of the questionnaire survey could generate some recommendations to alleviate the barriers to partnering success in future construction projects, such as the identification of critical success factors for partnering projects. The result is quite different from my study possibly due to the location, government policy or cultural differences.

In another study, Dikemen *et al.* (2005) conceded that the outcome of the critical success factors for partnering in the Turkish construction industry the results ranked 1st Cooperation among partners 2nd Clear definition of roles and responsibilities 3rd Mutual decision-making 4th Dispute resolution 5th Effective coordination among partners.

5.3 Conclusion

These are the conclusions drawn from the appraisal of the critical success factors of project partnering towards its adoption in the Nigerian construction industry.

- 1 It can be established from the results that Mutual trust among party members a primary (CSF) tool in adopting project partnering in the Nigerian construction industry.
- 2 From the result of the analysis it can be deduced that with support of top Managements team in the construction industries, as well as the adoption of preventive conflict resolution strategy, project partnering in Nigerian construction industry. Similarly, when team work and cooperation among party members are encouraged project partnering will be easily adopted.
- 3 From the ongoing, it can be established that Project partnering offers a wide range of benefits. Considering the Nigerian construction industry, one of the major benefits of project partnering as speculated is that it establishes good team work. Similarly, it also provides good conflict resolution strategy and ensures that mutual goals are shared among party members.
- 4 It can also be established that one of the major barriers to project partnering in the construction industry is the adversarial relationships among the various professionals in the construction industry. Similarly, another key barrier is the misunderstanding of the concept among the various professionals in the construction industry. More so, it was identified that the inadequate involvement of key party members even from project procurement stage is also a major barrier to project partnering in Nigerian construction industry.

- 5 Finally, it can be established that irrespective of the Categories a professional find himself/herself in the construction industry (i.e either as a client, consultant or contractor), there is a pressing need for project partnering. There is also consistency and similarity on how CSF affects project partnering in the research work Chan *et al.* (2001) in Hong Kong and the Nigerian construction industry.

5.4 Recommendations

Based on the findings of this research, the following recommendations were made with a view to that it will encourage the adoption of project partnering in the Nigerian construction industry.

- 1 All stake holders in the construction industry should work together in prompting Mutual trust among party members of the construction team for the adoption of project partnering
- 2 Construction Company's top Managements should support of team work and provide avenue to involve all the necessary stakeholders even from the project procurement stage. By doing this Project Partnering can be easily adopted in the construction industries.
- 3 Similarly, professional and stakeholders in the construction industry should adopt project partnering as a preventive conflict resolution strategy as it tries to take care of the ambiguity in concepts or terms among professionals at the early stage of the construction process.
- 4 It is also recommended that the Professional bodies of the various professions in the construction industries should encourage it member to work with an objective mind and shun all forms of adversarial relationships with other professionals in the

discharge of their professional duties. When this reorientation is achieved project partnering easily adopted.

- 5 Finally, Government can also help foster project partnering by ensuring that all government construction project involves all the necessary professionals and Stakeholders early enough so as to encourage project partnering.

5.5 Contribution to Knowledge

Firstly, this study has provided empirical data on the construction professionals' appraisal on the CSF that influences Project partnering in Nigerian (particularly the North Central Nigeria). Based on the result The top three critical success factors of partnering are mutual trust among party members with 0.85 RII, Top Management support' was ranked second with the RII of 0.81, Preventive conflict resolution strategy, team work and cooperation among party members, can serve as a reference based for further studies on Project partnering even in other Industries in Nigeria as well as other part of Nigeria.

Secondly, with particular consideration of the nature of the construction industry in Nigeria, the Study have further validated proposed CSF from previous studies that can be adopted to encourage the adoption of Project Partnering in Nigerian Construction industry. The derived immense benefits from the work considering "it establishes good team work relationship" with mean rating of 4.05 and RII 0.81. 'It provides good conflict resolution strategy with a mean rating 3.99 and RII rating of 0.81, while mutual goal are shared among party members has a mean rating of 3.69 and RII of 0.74 as the top three most important benefits of improving and adopting partnering in Nigeria

Finally, the study had further contributed to literature including the major barriers of adoption of project partnering in Nigeria. Major barriers ranked adversarial relationships with the mean rating of 4.61, Misunderstanding of the concept, with the mean rating of

4.51, distrust and inadequate involvement of key party members with a mean rating of 4.03 respectively. However other organisations will acknowledge the major barriers in adopting project partnering.

5.6 Recommendations for Further Studies

1. The study recommends that this study be repeated in different parts of the country using different method of data collection and analysis.
2. The study also recommends that further research should be carried out at the industry's level to include more stakeholders (such as specialised subcontractors, building material suppliers and manufacturers)
3. The study also recommends further research on CSFs on partner selection on project partnering in Nigeria.
4. The study also recommends further research on Barriers and Drivers of Strategic partnering in Nigeria.

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APPENDIX I- QUESTIONNAIRE

**DEPARTMENT OF BUILDING,
FACULTY OF ENVIRONMENTAL DESIGN,
AHMADU BELLO UNIVERSITY ZARIA,
KADUNA STATE, NIGERIA.**

QUESTIONNAIRE ADMINISTERED FOR
AN APPRAISAL OF THE PERCEPTION OF PROFESSIONAL ON THE CRITICAL
SUCCESS FACTORS AND POTENTIAL BARRIERS OF PROJECT PARTNERING IN
NIGERIAN CONSTRUCTION INDUSTRY

Dear respondent

I am a master's student of the above named institution conducting a study titled "An Appraisal of the Perception of Professional on the Critical Success Factors and Potential Barriers of Project Partnering in Nigerian Construction Industry". This questionnaire is intended to obtain your perception on the subject of the study. All responses will be given utmost confidentiality and will be used for academic purposes only. Your cooperation is highly solicited. Kindly study and complete the questionnaire as carefully as possible

Thank you

Suleiman Ayuba Mikhail
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08030564100

SECTION A: RESPONDENT'S PROFILE

- 1) Please state the name of your firm
(optional).....
- 2) Please identify your present
profession.....
- 3) Please identify your area of Academic Qualification
 - a. Architecture []
 - b. Structural/Civil Engineering []
 - c. Mechanical Engineering []

- d. Quantity Survey
 - e. Building Technology
 - f. Estate/Facility Management
 - g. land Survey
 - h. Urban & Regional Planning
 - i. Other
- 4) Years of professional experience
- a. 1-5 yrs
 - b. 6-10 yrs
 - c. 11-15 yrs
 - d. 16-25 yrs
 - e. above 25 yrs
- 5) Area of professional/Practical experience in the Nigerian Construction Industry
- a. Consultant
 - b. Contractor
 - c. Client/Developer
 - d. Academics
 - e. Manufacturer/Fabricator/Subcontractor
 - f. Planning/Regulatory Institution
- 6) Highest Qualification Obtained
- a. O Levels
 - b. Ordinary National Diploma (OND)
 - c. Higher National Diploma (HND)
 - d. Bachelor's Degree
 - e. Postgraduate Diploma (PGD)
 - f. Master's Degree
 - g. Doctorate Degree

7. Size of projects handled by the Company according to the Federal Ministry of works categorization

- a. small 0-50 million Naira []
- b. medium 51-250 Million Naira []
- c. large above 250 Million Naira []
- d. not applicable []

SECTION B: CONCEPT OF PROJECT PARTNERING

8. Are you aware of the concept of project partnering?

- a. Yes []
- b. No []

9. If Yes for how long have you been aware of the concept of project partnering

- a. Less than a year []
- b. 1-5 years []
- c. 6-10 years []
- d. more than 10 years []

10. Have you participated in construction/project partnering before?

- a. Yes []
- b. No []

11. How often have participated in the partnering process?

- a. Most often []
- b. Often []
- c. Seldom []
- d. Never []

12. Which of the following definition in your own view best describe project partnering?

Do you agree that project partnering will solve most of the following problems: Time - overrun, cost- overrun, poor work.

- a. Yes []
- b. No []

**SECTION C: PROFESSIONALS VALIDATION THAT THE CRITICAL
SUCCESS FACTORS (CSF) IDENTIFIED FROM LITERATURES**

13 Please indicate the extent to which you agree to the following as critical success factor of partnering as they relate to your practical/professional experience? Please tick in the table below where appropriate. Answers should be based on a scale (1-5) as follows

1= Strongly Disagree 2= Disagree 3= Somewhat Agree 4= Agree 5= Strongly Agree

S/N	CRITICAL SUCCESS FACTORS OF PARTNERING PROJECT	1	2	3	4	5
1	Top management support					
2	Mutual trust among party members					
3	Team work and cooperation					
4	Open communication among participants					
5	Clear definition of responsibilities of party members					
6	Clear definition of partnering objectives					
7	Ability to generate innovative ideas					
8	Involvement of subcontractors and end users at early stage of the project					
9	Honesty among party members					
10	Integrity and respect among participants					
11	Adequate resources					
12	Long term commitment					
13	Preventive conflict resolution					

SECTION D: PROFESSIONALS RANKING OF THE CRITICAL SUCCESS FACTORS AS A TOOL IN PROJECT PARTNERING IN NIGERIAN CONSTRUCTION INDUSTRY

14. Please rank the most appropriate critical success factors based on importance. Based on your professional experience Please tick in the table below where appropriate. Answers should be based on a scale (1-5) as follows

1= Not important 2= Less important 3= Fairly important 4= Important 5= Very Important

S/N	CRITICAL SUCCESS FACTORS OF PARTNERING PROJECT	Responses				
		1	2	3	4	5
1	Top management support					
2	Mutual trust among party members					
3	Team work and cooperation					
4	Open communication among participants					
5	Clear definition of responsibilities of party members					
6	Clear definition of partnering objectives					
7	Ability to generate innovative ideas					
8	Involvement of subcontractors and end users at early stage of the project					
9	Honesty among party members					
10	Integrity and respect among participants					
11	Adequate resources					
12	Long term commitment					
13	Preventive conflict resolution					

SECTION E: BENEFIT OF PROJECT PARTNERING IN NIGERIA CONSTRUCTION INDUSTRY

15. Please indicate the extent to which you agree with the following as benefit of project partnering in Nigeria construction industry in relation to your professional operations. Please tick in the table below where appropriate. Answers should be based on a scale (1-5) as follows

1= Strongly Disagree 2= Disagree 3= somewhat agree 4= Agree 5= Strongly Agree

S/N	BENEFIT OF PROJECT PARTNERING IN NIGERIA CONSTRUCTION INDUSTRY	1	2	3	4	5
1	It enhance reduction in budget cost					
2	Early implementation of the construction project					
3	It speeds time of project implementation					
4	Its establishes good team work relationship					
5	It provides good conflict resolution strategy					
6	It enhances risk sharing among party members in the construction team					
7	Provides Lower operational cost among party members					
8	Construction project cost savings					
9	It enhances quality improvement of the project					
10	It enhances improvement in design					
11	Develop understanding among party members					
12	It enhances economic growth of the nation					
13	It increases customer/client satisfaction					
14	It enhances facility maintenance					
15	It encourages financing option					
16	It reduces project risk					
17	Mutual goals are shared among all participants					
18	It involves the end users and subcontractors at the early stage of the project					
19	Honesty in accepting responsibility among participant					
20	All parties are willing to eliminate waste and problems to improve					
21	All parties set to a win-win attitude					

22	Reduction in administrative cost					
23	Reduction in variation					
24						

SECTION F: BARRIERS OF PROJECT PARTNERING

16. Indicate to which extent you agree to the following as barriers to the adoption of partnering in Nigeria construction Industry. Use scale of 1-5 where 1= Strongly Disagree 2= Disagree 3= somewhat agree 4= Agree 5= Strongly Agree

S/N	BARRIERS OF PROJECT PARTNERING	1	2	3	4	5
1	Misunderstanding of the concept					
2	Inadequate effective communication					
3	Adversarial relationship					
4	Distrust					
5	Failure of sharing risk					
6	Over dependence on others					
7	Cultural and Ethnic differences					
8	Uneven commitment of participants					
9	Corruption among member parties					
10	Lack of continuous improvement					
11	Insufficient problem solving strategy among participants					
12	Insufficient effort by participant to keep partnering going					
13	Complacent relationship among participants					
14	Inadequate training and knowledge sharing among participants					
15	Inadequate information sharing					
16	Inadequate involvement of key party members of partnering					
17	Lack of top management support					