# An Assessment of Success Factors and Benefits of Project Partnering in Nigerian Construction Industry

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### Abstract

The adoption of project partnering is increasingly been used as one of the innovative tools to effect quality changes on construction projects and overhaul the shortcomings of traditional approach to procurement system. In Nigeria, the drive to achieve greater value on every infrastructural project has prompted the Government and project owners to embrace project partnering. This study seeks to assess and distinguish the various potential factors contributing to project partnering success, and analyse the benefits that can be accrued from its efficient practice in Nigerian construction industry. Data for this assessment were collected through industry based survey questionnaires different types of organisation in Nigeria - clients, consultants and contractors, on the subject matter. A total number of Ninety-five questionnaires were distributed and seventy-eight was returned. The data obtained were analyzed by using percentile and one-way analysis of variance. The research confirms that Nigeria contractors and clients are more supportive on project partnering is to succeed in Nigeria These include a collaborative team culture, long-term quality focus, consistent objectives, and resource-sharing, if properly implemented can provide a workable model for enhancing overall project performance.

Keywords: construction industry, project partnering, project performance, success factors, Nigeria

## 1. Introduction

The construction industry is no doubt a very competitive and risky industry, and the engagement of infrastructural projects are highly capital intensive. The progress of these infrastructural construction projects is hindered by several factors, such as lack of cooperation, limited trust, and ineffective communications often resulted in an adversarial relationship among the project participants. This kind of relationship is always reflected in difficulties in resolving claims, cost and programme overruns, low profitability, litigation, and a win-lose-climate which invariably affect the completion of the project within schedule and with the required standard (Moore et al 1992). The persistence of these circumstances in the recent past had attracted many developed and developing countries, Nigeria among to adopt one successful management method that helps to provide innovative solutions and better resolve conflict. This technique is partnering, a collaborative system of procuring construction projects.

The first broad application of this project partnering in construction industry was by the United States of America Army Corps of Engineers in the late 80s (Jones Day,2002). In United Kingdom, it was first applied on the North Sea oil and gas industries in the early 1990s (Bennett, 2000). In 1994 Sir Michael Latham came out with a reviewed partnering notion and it was commissioned by the UK government. In South African construction industry, partnering application is on high increase (Baird and Bennett, 2001). In Hong Kong, the intensive reviews of the construction industry (Tang Report and Grove Report) have advocated partnering and it has recently been introduced on a number of projects including one high profile metro project (Bayliss, 2002).

In Nigeria, the adoption of this new procurement technique other than traditional system is to encourage the private sectors to actively participate in the financing, construction, management and operation of infrastructure services and facilities in the country. This will establish a long-term relationship that will foster an organizational environment where trust, increased open communications and employee involvement in construction project so as to lower the risk of cost overruns and delays as a result of better time and cost control over the project. It will also increase the opportunity for innovation, especially in the development of value engineering changes and constructability improvement.

Significantly in Nigeria, project partnering techniques have been gradually applied to some projects, and because of the growing quest of people's demand for substantial improvement in project performance, corporate bodies, professional organizations, financial institutions, international and local donor agencies are coming together to fully participate in partnering so as to ensure its effectiveness to achieve the sole desire. Some of the recent reference projects are the gas flaring projects implemented in a joint venture between the Nigerian National Petroleum Corporation (NNPC) and the oil multinationals, Zenith Bank Plc partnered some organisation on infrastructural development in Port Harcourt, River State, etc. In a nut shell, there is huge embrace of partnering as alternative due to perceived failings of traditional system of procuring construction contract that calls for changes. There is therefore the need to review the success factors as well as the benefits that are

accruable or obtainable from partnering system. This study therefore aimed at investigating partnering success factors and it benefits in Nigerian construction industry.

# 2. Partnering as an innovative procurement technique

From the available literature (CII, 1991; Cowan et al., 1992; Moore et al., 1992; CII, 1996; Bennett and Jayes, 1995; Barlow et al., 1997; Bennett and Jayes, 1998; Bresnen and Marshall, 2000) it is very clear that different perceptions towards partnering prevail. There is conformity over the general concept of partnering as a cooperative relationship between business partners in construction industry formed in order to improve performance in the delivery of projects but there is considerable variation of definition. This inconsistency is undoubtedly due to the different world perspectives of the authors and variations in the development and implementation of partnering between national industries and also within national industries. Confusion over definitions is further fuelled by the often imprecise use of the term partnering in industry literature. This general use of partnering without further detailed references in fact often counter-productive and tends to propagate the perception of partnering as fuzzy concept which is talked about by many but few understand.

Barlow et al. (1997) conclude that partnering is best considered as a set of collaborative processes. Processes which emphasise the importance of common goals and raise such questions as how such goals are agreed upon, at what level are they specified and how are they articulated? Chris (2004) stated the following generic definition as it reflects the views held in most literature reviewed:

- partnering is a set of collaborative processes rather than simply a form of relationship;
- partnering is a co-operative arrangement between two or more organisations based on mutual objectives and increased efficiency through shared resources, open communications and continuous improvement;
- partnering is applied in either in project partnering or in a long-term relationship known as strategic partnering;
- project partnering is typically practised at a first generation level or at a more developed, more committed second generation level (mature partnering) (Baird and Bennet, 2001).

Construction Industry Institute (CII 1991) cited Partnering as a long-term commitment between two or more organisations 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 some certain key elements:

• commitment- this must come from top management since jointly-developed partnership charter is not a contract but a symbol of commitment;

- equity- all participants' interests are considered in creating mutual goals and there is to satisfying each participant's requirements for a successful project by utilizing win/win thinking;
- trust- teamwork is not possible where there is cynicism about the others' motives. Through the development of personal relationships and communication about each participant's risks and goals, there is better understanding. With understanding comes trust and with trust comes the possibility for synergistic relationship;
- development of mutual goals/objectives- at a partnering workshop the participants identify all respective goals for the project in which their interests overlap. These jointly-developed and mutually agreed to goals of each party, limiting cost growth, limiting review periods for contract.

### 2.1 Elements for the success of project partnering

Several analysts and writers have identified critically a variety of requirements and factors responsible for the success of partnering relationships in construction industry, among these analyst are Chadwick (1995), Dixon (1996), Tyler and Matthews (1996), Cheng et al. (2000) and Black et al. (2001). Despite the variations in their findings, the results of such studies tend to re-affirm Bennett and Jayes' (1998) assertion that the concept of true partnering feeds on co- operation and teamwork, openness and honesty, trust, equity and equality, if it is to succeed. The output work of Lui and Fellows (2001) provides a useful synthesis of these views by concluding that partnering can enhance project performance subject to both (1) work assurance – that partners will work together for the synergistic whole, and (2) benefit assurance – that gains will be distributed equitably. These appears to be a reasonably widespread belief, therefore, that given the right circumstances to this method of procurement more than any other can deliver 'win-win' solutions for all involved.

Saunders (1994) advocates a 5-stage process for organizations wishing to adopt the partnering approach to procurement: (1) identify the product and services that will benefit from partnering, (2) convince internal and external organisations of the benefits that can be achieved, (3) select the first partners by concentrating on suppliers of key products and services identified, (4) define the objectives of the relationship to ensure that both parties have a clear purpose in their activities; Lewis (1995) recommends setting both short and long-term objectives to ensure that current activities are consisient with the strategic plans of both parties. And finally, (5) refine and develop the relationship to ensure that lessons are lessons learnt from mistake prior to rolling-out the new approach.

Lorraine (1994) identified a workshop approach to successful partnering. The workshops, attended by personnel from both parties, should be established to encourage the cultural change required. The worksop they said, carrying the support of champions within both organizations, should establish the procedures for the avoidance of conflict and devise a project mission statement. The workshop participants should be drawn from the senior management team and must be fully committed to making the partnership work.

Chan (2004) cited several empirical studies and the opinions of industry practitioners from archival data identifying factors responsible for the success of project partnering which were reviewed in this study. These factors are therefore grouped and summarized as follows: (1) Collaborative team culture, (2) Long-term quality perspective, (3) Consistent objectives, and (4) Resource sharing.

#### 2.1.1 Collaborative team culture

According to Chen and Chen (2007), six significance success factors were potently identified, all related to collaborative team culture as discussed below.

#### (a) Efficient coordination

Mohr and Spekman (1994) posits that coordination reflects the expectations of each party from the other parties in fulfilling a set of tasks. They asserted that before attaining a good coordination that will result in the achievement of stability in an uncertain environment, an increase in contact points between parties and sharing of project information must be in place.

#### (b) Partnership formation at the design stage

Lewis (1995) advocates the involvement of key suppliers during the design stage of a project. He acknowledged that traditional competitive tendering invites narrow responses as suppliers must meet bidding specifications to ensure that their offer is considered. By failing to involve suppliers in the design process, considerable potential values may be lost. Lewis argued further that this stifles creativity and changes made following a competitive tendering exercise are costly because of the lost time and aborted design costs. Chen and Chen (2007) stipulated that one of the key rules related to partnership formation is that for design to be effective each firm must be feel free to question any assumptions made and may make the expert party question its own assumptions, sometimes with surprising results.

### (c) Dedicated team

The success of every construction project demands dedication from senior to the junior staff right from the inception. The findings of Cheng et al. (2000) are directed to external and internal staff to a project firm, and indicate the actions required to achieve changes as dedication. He said commitment and support from partnering organizations are crucial, as they are the sources of transferred knowledge and information.

#### (d) Flexibility to change

Chen and Chen (2007) emphasized that construction projects are dynamic and may change from time to time due the nature of the environment the projects involved. He acknowledged that for a successful project partnering staff must be flexible to the changes so as to ensure that the programs, policies, procedures and practices are restructured to meet the partnership vision, mission, values and goals.

#### (e) Long-term Committment

Bresnen and Marshall (2000); Cheng et al.(2000) said long-term commitment can be regarded as the willingness of the involved parties to integrate continuously to unanticipated problems. More so,

Mohr and Spekman (1994); Kelly (2005) anticipated that more parties are expected to balance the attainment of short-term objectives with long-term goals and achieve both individual and joint missions without raising the fear of opportunistic behaviour.

#### 2.1.2 Long-term quality perspective

According to Chen and Chen (2007), three significance success factors are potently identified all related to long-term quality perspective, and it includes: (i) Productive conflict resolution strategy, (ii) Commitment to quality, and (iii) Commitment to win-win attitude.

#### (i) Productive Conflict Resolution Strategy

Slater (1998); Lazar (2000) stated that because of the discrepancy in goals and expectations, conflicting issues are commonly observed among parties. Conflict resolution techniques such as coercion and confrontation are counter-productive and fail to reach a win-win situation. Cheng et al (2000) claimed that conflicting parties look for a mutually satisfactory solution, and this can be achieved by joint problem solving in order to seek alternatives for problematic issues. Such a high level of participation among parties may help them to secure a commitment to a mutually agreed solution.

#### (ii) Commitment to Quality

This factor is very important in project partnering because the attitude of the actors to commitment has a great influence on the quality of outputs. Unlike traditional method of procuring construction project, quality remains a watch-word as a result of committed resources.

#### (iii) Commitment to Win-Win Attitude

According to Chan, Chan, Chiang, Tang, Chan and Ho (2004), win-win environments should be developed to replace a win-lose attitude. It also represents the open arising of problems among parties and a non-defensive manner during arguments. It explains that all team members could make decisions alone because of clear identification of responsibility and accountability. In addition, the establishment of sharing risks, rewards, and the willingness to exchange ideas are illustrated. The participants could make and keep real commitments. Therefore, a long-term commitment to the process among the parties could be created.

#### 2.1.3 Consistent objectives

Under this group the under listed five success factors were identified from the literatures:

(a) mutual trust, (b) effective communication, (c) clear definition and understanding of responsibilities, (d) behaving in a manner consistent with objectives, and (e) technical expertise.

#### 2.1.4 Resource sharing

In the case of resource sharing, five success factors were identified from the literatures as follows: availability of resources, support from Top Management, financial security, equal power/empowerment, and total cost perspective.

### 2.2 Benefits of successful project partnering

Chris (2004) identified the common response of people new to the ideas of partnering as to question the tangible benefits which partnering can bring to their organization. He said this is an understandable reaction particularly into today's economic climate where every element of business strategy is carefully scrutinized in terms of its potential for adding value. No doubt partnering has recorded a number of benefits through practising but before these positive results came into effect there are a lot of problems in measuring the performance of partnering in real sense. Slater (1998) recognized major problems in analysing the positive effectiveness of partnering in construction industry. In his assessment, two major reasons were identified: (1) partnering consists of a number of interrelated business processes which always occurred at the sametime within the framework of an overall project management process making it difficult to disseminate any benefits (or problems) and attach them to a particular partnering process; and (2) objectives differences of organizations involved in project partnering, the degree of measuring the attainment to which all mutual and individual goals are being achieved are difficult.

According to Chan, Chan, Fan, Lam, and Yeung (2005), and Black, Akintoye and Fitzgerald (2000) the underlisted benefits of partnering can be achieved by government or any organization if project partnering is proper implemented: reduction in costs and time of project implementation, establishment of good and less adversarial relationship, risk sharing, operational savings, increased implementation speed, construction projects cost savings, quality improvement (access skills, experience and technology), improved design, increased understanding of parties, increased customer satisfaction, enhanced economic growth of a nation, facilitate creative and innovative solutions, true costing and true value, enhanced facility maintenance, improved return on resources, increased revenue generation to the national development, improved administration, financing option, and reduced risk exposure, etc.

## 3. Research methodology

Data were collected from construction firms, consultancy firms and clients in the south Western geo political zone of Nigeria that have project partnering experience. Out of the 95 questionnaires that were administered, 73 of these were suitable for analysis. The responses gathered from these sources provided an absolute and reasonable conclusion for the assessment of success factors and benefits of project partnering in Nigerian construction industry. Percentiles and One- Way analyses of variance (ANOVA) were utilized in the analysis of data collected.

Table 1: Designations	of Respondents
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Profession	Frequency	Percentage (%)		
Engineer	21	28.77		
Quantity Surveyor	17	23.29		
Architect	17	23.29		
Contractor/Builder	18	24.65		
Others	-	-		
Total	73	100.00		

Table 1 shows the profession of Respondents on the assessment of success factors and benefits of project partnering in Nigerian construction industry. It is evident from the table that 28.77% of the respondents are Engineers; 23.29% Quantity Surveyors; 23.29% Architects and 24.65% Contractors/Builders.

Years of Experience	Frequency	Percentage (%)
0-5	10	13.70
6–10	20	27.40
11–15	22	30.14
16–20	21	28.76
More than 20	-	-
Total	73	100.00

Table 2: Respondent's Years of Experience

Table 2 shows the industrial working experience of the respondents. The average years of experience of respondents were 12 years. One can infer from table 1 and 2 that the respondents are highly knowledgeable and are experienced thus information provided can be relied upon.

In accordance with respondents' roles and responses, one-way analysis of variance was performed through statistical package for social science on the survey data and the results of the analysis were presented in Tables 3 to 5. The tables show 'F statistics' (based on F-ratio or value) this tests was performed to see if there is an agreement in the opinion of the three groups of respondents by comparing their mean values. The value of 'F significant' indicates the probability of rejecting the null hypothesis of no difference between the mean values between groups. Lower probability value indicates that the null hypothesis can be rejected, suggesting that there is difference of opinion between groups.

A probability value (significance level) below threshold value of 0.05 suggests a high degree of difference of opinion between groups on that factor. For example, in relation to Table 3 factor 1 (exploitation is regarded as a perceived failing of traditional adversarial relationships) the F ratio is

6.10 and the observed significance level is less than 0.01; one can reject the null hypothesis suggesting that there is no consensus of opinion between the groups (consultants, contractors and clients) that exploitation is regarded a perceived failing of traditional adversarial relationships to the same extent. This implies that there are differences of opinion between the three groups. This is supported by the mean value of 3.00 for the factor by consultants compared with 4.23 by contractors and 3.95 by clients. It is worthwhile to note that the factors were ranked according to their means value.

				ANOVA <sup>a</sup>	
Failing Factors	C1	C2	С3	F Statistics	Significance level
Exploitation is common	3.00	4.23	3.95	6.10	0.01
Specification rigidity	3.11	3.84	3.48	2.31	0.11
Decisions are made with limited knowledge	3.19	3.55	3.62	0.75	0.47
Short-term focus	3.15	3.29	3.86	1.94	0.15

Table 3: Perceived failings of Traditional Adversarial Relationships in Nigerian (by organisational category) [C1-Consultants, C2-Contractors, and C3-Clients]

Table 4 shows the opinion of respondents on the factors perceived to be responsible for the success of project partnering in Nigerian construction industry. It can be seen from tables 4 that all respondents believe that mutual trust is essential for success in the project partnering relationship; and while consultants have rated it highly, contractors and clients rated it more essential. This result is encouraging, given the fact that traditional relationships between contractor and client are widely known to be mistrustful. Therefore, the analysis depicted that organizations which have not been involved in project partnering have recorded a slightly lower rating for this factor (p = 0.15), although it is their most important one.

From the analytical tables, effective communication was also given a very high rating by all categories, and by both organizations involved and those not involved in project partnering. Support from top management was also considered an important factor. Contractors and clients regard this as an important factor. Consultants, however, rated it as a lower priority. Since many consultants are partnership based, they likely to be involved in decision making and therefore less likely to be frustrated by a board of directors far removed from the day to day problems of construction projects. Organizations with experience of partnering have rated this much more higher than those without. As with any new approach, without the backing of senior management, it is unlikely to succeed. Clear definition and understanding of responsibilities was also rated as an important factor, by organizational category (p = 0.23), and by organization who involved in project partnering and those without partnering experience (p = 0.06).

Table 5 shows the respondents opinions on the benefits attributable to project partnering by organization category. It can be extracted from the assessment of the rating results that the three most

essential benefits that have the highest mean values are: establishment of good and less adversarial relationship (4.30). This therefore indicated that consultants, contractors and clients believe that as a result of proper partnering planning, there will be an efficient establishment of good relationship among the parties to the construction project with a significant level of 0.07.

Increased customer satisfaction was rated most important by contractors (4.45) and clients (4.24) more than the rating of consultants (3.85); this is because contractors and clients are directly connected to the project execution under the umbrella of project partnering. Also, understanding of parties will be increased was as well ranked among the most important benefits.

The least important benefits are operational savings, construction projects cost savings, it encourages financial option, and increased revenue generation to the national development. Table 9 shows that most of the benefits expected from the parties are better relationships rather than project-based benefits (such as improved design, quality improvement, understanding of the parties, etc.). It can therefore be deduced that because a better relationship between the parties produces the project-based benefits, the project-based benefits have not been rated highly by the respondents, Black et al (1999).

				ANOVA <sup>a</sup>	
Success Factors	C1	<i>C</i> 2	СЗ	F Statistics	Significance level
Establishment of efficient coordination	3.58	3.84	3.95	0.75	0.47
Partnership formation at the design stage	3.69	3.90	3.95	0.28	0.76
Dedicated team	3.80	4.45	3.76	2.94	0.06
Flexibility to change	3.81	4.19	3.95	1.02	0.37
Long-term commitment	3.81	3.97	3.76	0.29	0.75
Productive conflict resolution strategy	3.61	3.97	3.90	0.84	0.44
Commitment to quality	3.96	3.87	4.14	0.47	0.63
Commitment to win-win attitude	3.77	4.03	4.05	0.52	0.60
Mutual trust	4.38	4.74	4.71	1.30	0.28
Effective communication	4.19	4.77	4.48	2.87	0.63
Clear definition and understanding of responsibilities	4.19	4.58	4.57	1.49	0.23
Behaving in a manner consistent with objectives	3.88	4.42	4.14	2.59	0.08
Technical expertise	3.65	3.93	3.62	0.96	0.39

Table 4: Factors that are responsible for successful project partnering in Nigerian construction industry (by organisational category) [C1-Consultants, C2-Contractors, and C3-Clients]

Availability of resources	3.65	3.64	3.76	0.11	0.90
Support from Top Management	3.92	4.77	4.71	8.03	0.01
Financial security	3.38	3.97	3.67	3.03	0.05
Total cost perspective	3.61	3.97	3.95	1.39	0.25

 Table 5: Benefits which can be achieved from the use of project partnering in Nigerian construction
 industry (by organisational category) [C1-Consultants, C2-Contractors, C3-Clients]

	Cl	<i>C</i> 2	C3	ANOVA <sup>a</sup>		
Benefits				F Statistics	Significance Level	
Reduction in costs and time of project implementation	3.42	4.13	3.81	2.61	0.08	
Establishment of good and less adversarial relationship	4.15	4.52	4.24	2.70	0.07	
Risk sharing	3.19	3.77	3.29	2.90	0.06	
Operational savings	3.11	3.45	3.62	1.58	0.21	
Increased implementation speed	3.81	4.13	3.76	0.87	0.42	
Construction projects cost savings	3.11	3.45	3.62	1.58	0.21	
Quality improvement	3.73	3.68	3.67	0.02	0.98	
Improved design	3.27	3.71	3.67	1.39	0.25	
Understanding of parties will be increased	3.81	4.06	4.09	0.64	0.53	
Enhanced economic growth of a nation	3.42	3.84	3.57	0.92	0.40	
Increased customer satisfaction	3.85	4.45	4.24	2.70	0.07	
Enhanced facility maintenance	3.38	3.71	3.38	0.32	0.73	
Improved return on resources	3.35	3.55	3.38	0.31	0.73	
Increased revenue generation to the national development	2.08	2.03	2.71	1.74	0.18	
Improved administration	3.50	3.90	3.76	1.13	0.33	
It encourages financing option	3.31	3.29	3.00	0.56	0.57	
Reduced risk exposure	3.54	4.06	4.14	2.31	0.11	

# 4. Conclusions and recommendations

This research work has conducted an analysis of success factors and benefits of project partnering in Nigerian construction industry. The following findings were drawn from an in-depth analysis of the research work:

- 1) The use of project partnering is on the increasing trend in Nigerian construction market. Many companies who participated in this research work have already been involved in project partnering;
- 2) The research respondents believe that certain requirements must be met if project partnering is to succeed in Nigerian construction industry; in specific, mutual trust, good and effective communication, commitment from all parties, a clear understanding of roles, consistency and a flexible attitude. It is a common notion that considerable effort from all parties to a contract will definitely beget changes;
- 3) There are many benefits that can be derived from the use of project partnering to execute construction projects. And these benefits are beneficiary to all contracting parties, including clients, consultants, project managers, main contractors, sub-contractors, and on-site employees. An establishment of good and less adversarial relationship, increased customer satisfaction, an improved understanding of the parties to eradicate the root causes of poor project performance and ineffective communication and increase in project implementation speed are some of the highly benefits designated to Nigerian construction industry;
- 4) The project partnering process could empower the project personnel to accept responsibility and to do their jobs by delegating decision-making and problem-solving to the lowest possible level of authority. Project partnering could generate a workable model for people to communicate more effectively and efficiently thus eliminating unnecessary misunderstanding and possible conflicts, when properly implemented.

## 4.1 Recommendations

It is worthwhile to connote that the findings of this research collaborate with the recommendations of Latham Report published in the United Kingdom, which forms the basic guidelines and skeletons for implementing successful project partnering. Therefore, based on the derived research conclusions, the following recommendations are made for the improvement of construction projects in Nigeria:

 The Nigerian construction industry should widely accept and practice project partnering across a wide spectrum of the industry in order to exploit the sustainable treasures and benefits it offers as an alternative method of procuring construction contracts to traditional method because of its numerous advantages;

- 2) In assembling a construction partnering team members, careful consideration should be given to professional experience, the personalities of the construction partnering team members, and to whether he team has sufficient skills in multiple disciplines;
- Emphasis should be given to the early implementation of construction partnering process and a structured approach, also to the design of partnering activities, regular monitoring of partnering process, selection of qualified facilitators for partnering workshops, and appointment and true empowerment of the partnering champions;
- 4) The professional bodies like the Nigerian Institute of Quantity Surveyors (NIQS), Nigerian Society of Engineers (NSE), Nigerian Institute of Builders (NIOB), Council for Regulation of Registered Engineers in Nigeria (COREN) etc should lend their assistance in form of workshops, seminars, discussions etc to give more enlighten to construction project participants (i.e. clients, consultants and contractors) on how project partnering works, its success factors, and the benefits that can be achieved from its adoption.

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