



Factors Responsible for Slow Adoption of Partnering on Construction Projects in Nigeria

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History:

Received: 10 November 2017
Accepted: 22 December 2017
Available Online: 30 January 2018

Keywords:

Partnering, Slow-adoption, Procurement, Construction practitioners

DOI:

10.11113/ijbes.v5.n1.249

ABSTRACT

Partnering procurement method attracted general acceptance due to potential benefits attached globally. Partnering arrangement was embraced in Nigeria, but the level of implementation is low, the stakeholders hold on to the traditional procurement in spite of its harbored problems. A study that investigated the factors responsible for the slow adoption of partnering in construction in Nigeria is rare. This paper examined factors responsible for the slow adoption of partnering in construction projects execution in Nigeria. This study was conducted using quantitative approach via self-administered questionnaires on construction practitioners (clients, contractors, and consultants) that have handled partnering projects before. The analysis was conducted using descriptive statistic, Kruskal-Walis, and factor analysis. The analysis reveals that there is an agreement in the ranking of twenty-five out of the twenty-nine factors identified. The study discovered that attitudinal and behaviors factor; lack of technical know-how; external, economic, and institutional related factor, procurement related factor, ineffective communication; unethical related issues, and lack of commitment are responsible for low level of implementation of partnering in Nigeria. The study findings would assist the practitioners and decision makers on how to achieve best results from their partnering projects. It would also lead to performance improvement which would subsequently lead to the reaping of benefits. The understanding of these factors would assist the decision maker to plan to tackle it.

1. Introduction

Construction industry globally from its inception is based on traditional procurement method and contractual arrangements that put stakeholders on adversarial relationships because it encourages differences in values, orientations, and goals within the construction project team.

The industry is highly fragmented which is responsible for the challenges such as time and cost overruns, poor quality, and dispute, (Cheung et al., 2003; Bresnen and Marshall, 2000; Aarseth et al., 2012). Egan, (1998) suggested collaborative procurement methods such as joint venture, partnering and so on as the way out of these challenges. The interest of this study is on partnering, a construction

project procurement method introduced in 1988, and the US Corp of Army engineers was first to apply it, and since then it has spread to other countries. Scholars highlighted potential dividends of partnering implementation in their studies, among identified benefits are quality, safety performance, dispute resolution, improved client satisfaction, and time and cost reductions (Chan et al., 2003, 2006; Barlow et al., 1997; Egan, 1998;). Recently there is an increase in the trend of partnering usage; this is not surprising due to its potential benefits. Nigeria followed suit in implementing partnering on projects in 2002 (Kadiri et al., 2015). The challenges of the traditional procurement method coupled with numerous benefits attached to partnering paved the ways for partnering, as an alternative approach for delivering construction project in Nigeria (Awodele & Ogunsemi, 2010). Implementation of partnering took off successfully, but unfortunately, the outcome of the subsequent partnering projects has not been too encouraging in Nigeria. Partnering implementation in Nigeria is trailing with challenges which impacted negatively on the general acceptance of partnering on the project.

Nigeria is among the list of countries that occupied the lowest positions in the level of adoption of partnering (Akintoye, 2015). Nigeria, a developing nation that direful need developmental projects supposed to grab the opportunity provided by this alternative procurement method still lags behind. There is no reason why developing countries like Nigeria should not successfully embrace partnering in project execution. Koraltan and Dikbas, (2002) asserted that partnering management approach is suitable for all countries since no literature said it is not appropriate for a particular country. Partnering implementation in Nigeria is bedevilled with various forms of challenges such as disputes and poor performance. Examples of partnering projects with one issue or another are the Olokola FTZ gas project and Lagos to Ibadan expressway (Oluwaseun & Odun, 2014). The poor performance of partnering procurement method has led to a reduction in implementation rate. Yang et al., (2010) asserted that the failure of partnering reduces the interests of construction practitioners from partnering application.

Due to a high level of infrastructure deficit and poor performance of traditional procurement method, Nigeria needs a procurement that will add values to the industry regarding the developmental projects. Also, the majority of her subcontractors remain idle due to their inability to secure job as a result of lack of capacity and resources. This paper sets out to identify the key factors responsible for slow and unsuccessful partnering implementation on construction projects in Nigeria. The objectives pursued

are: to identify and assess the key factors responsible for the slow partnering implementation rate in construction projects in Nigeria, to test if there is agreement among the stakeholders on ranking the factors, and to suggest possible measures to improve the applicability of partnering on future projects.

Studies that address the factors responsible for the slow and unsuccessful adoption of partnering implementation in Nigeria are rare. In spite of the failure of the traditional procurement method partnering procurement approach is yet to be fully embraced in Nigeria (Ogunsemi et al., 2008; Okereke, 2007). The inability of partnering method to meet the stakeholder's expectations is the main reason why stakeholders are sticking to the non-performing traditional method. Therefore. this paper is set to fill this gap by identifying factors responsible for the slow adoption of partnering on projects in Nigeria and proffers possible solutions. This study finding would be of great benefit to the practitioners and policymakers and will enhance partnering implementation in Nigeria by eliminating factors impeding its adoption. This paper would enhance partnering performance improvement and derive benefits. The study has the capability of contributing to the body of knowledge in partnering, most especially in developing countries.

2. Theoretical Background

2.1 Partnering Implementation in Nigeria

Plethora definitions of partnering are in the literature; some authors considered partnering as a form of a collaborative approach in which all stakeholders agree to give their best to ensure the project objectives. Stralkowski & Billon (1988) considered partnering as a process in which two or more parties co-operate to achieve their separate but complementary goals and objectives. Despite the variance in the definitions, studies on partnering agreed on the principles of mutual trust, commitment, shared goals, and effective communication. Nigeria adopted partnering in 2002 on the airport project. Prominent among the projects initiated through partnering arrangement is Murtala Mohammed Airport (MMA2) project; Lekki-Epe road; Lagos-Ibadan expressway; Abuja-Kaduna-Kano highway rehabilitation and upgrade; Ayegbaju Market and Sunshine Housing Estate; Talba Housing Estate in Minna among others (Opawole & Jagboro, 2016). But it is worrisome to note that partnering projects in Nigeria are bedevilled with various forms of challenges such as disputes and poor performance. The Lagos-Ibadan expressway (105 km) project, awarded in 2009 revoked in November 2012. The

Nnamdi Azikiwe Airport, Abuja project was also revoked from the first contractor for non-performance (Kadiri et al., 2015; Opawole & Jagboro, 2016).

In April 2003, the general aviation terminal project was contracted out at 18 months estimated duration, but in July 2004, the contract was reversed to thirty-three months. The project could not be delivered at the expected time of thirty-three months due to a disagreement that trailed the project. The project failed to meet the delivery period as a result of lack of commitment and under-performance (Opawole & Jagboro, 2016). Furthermore, the Murtala Mohammed Airport Terminal 2 (MMA 2) project valued at about US\$250 million commissioned in April 2007, lasted for seven years till today, is enmeshed in controversy. This contract passed through five different chief executives, and six different ministers of the Federal Airports Authority of Nigeria (FAAN). Each of these people was with different policies, divergent opinions, and perspectives on implementation (Afolabi 2011). In all these projects the clients' desired goals were not achieved. As at today, more than five partnering projects cases are in the court of law due to disputes (Iboh et al., 2013). All those cases are signs of deteriorated or adversarial relationships between project parties involved which might lead to poor project performance (Black et al., 2000; Meng, 2012).

2.2 Factor Impeding Successful Partnering Implementation

Numerous factors prevent partnering from accomplishing set target and therefore slow the implementation process. Many scholars referred to factors responsible for the slow adoption of partnering as barriers which varied from country to country. Globally, government intervention on construction industry is necessitated by the contributions of the sector to their economy grow. The intervention may have positive or negative impacts on the partnering implementation. Zuo et al. (2013) referred to these interventions as the juristical barriers which may be related to construction law. Implementation of partnering is atime restricted unknowingly by construction-related laws and interventions. Larson and Drexler (1997) uncovered five major barriers to successful partnering, namely: adherence to the key elements of partnering, perceptions, knowledge, and skills of partnering approach, and the nature and structure of partnering projects.

Culture also plays a prominent and dual role in partnering relationships (an enabler and barrier). Not all cultural values of a country are in line with partnering principles; parts may permit or against the implementation of

partnering (Zuo et al., 2013). For instance, Chinese cultural values facilitate partnering implementation due to mutuality and respect, trust and friendship embedded in their cultures which are partnering implementation success factors (Kwan and Ofori 2001). Partnering arrangement encourages the project participants to have "direct dialogue" in which participants are free to raise their views on issues concerning the project. Any country that her culture is not supporting dialogue may have a problem implementing partnering. A culture that accepts boss orders and does not allow contributions from subordinates concerning issues raised is large power distance dimension; this type of culture is not supporting partnering implementation.

Kwan & Ofori (2001) asserted that there are certain attitudes and behaviours entrenched in the industry's culture which usually influences partnering implementation which may be difficult to change overnight. Hasanzadeh et al., (2014) affirmed that large numbers of partnering implementing challenges are cultural related, it may be an organization, industry, and national culture; they all have big roles to play in partnering implementation. Most atimes construction industry culture does not allow for learning culture because there is no provision for open questioning as against the partnering principle. The industry culture of conservatism and rigidity are barriers to partnering implementation since there is no allowance for compromise and team working (Ng et al., 2002, Hong et al. (2012). The industry possesses the culture of win-loss which is associated with an adversarial relationship which obstacle to partnering implementation (Bresnen and Marshall, 2000). The participants do not believe in team working to solve the problem. The culture of conservative and defensive always suppress change; they always like to maintain the same status quo (Eriksson et al., 2008).

In spite that subcontractors usually handle the largest percentage of construction works, the industry idea of excluding subcontractor during project planning arrangement (design stage) decreases the subcontractors' commitment to the project and this is hampering partnering implementation (Ng et al., 2002; Akintoye et al., 2000). Le-Hoai et al. (2010) asserted that lack of key stakeholders' involvement is partnering implementation challenge. Furthermore, relationships develop base on continuous working together, but unfortunately, one-off projects that are short-term in nature may not allow this to happen. One-off project cannot provide continuity expect for a relationship to develop, and this slows down partnering implementation (Eriksson et al., 2008). Mostly of the workers on one-off project work to get whatever

they can get within that contract period which leading to opportunistic behaviours (Cox and Thompson, 1997).

Bureaucratic impede the effectiveness of partnering procurement method regarding the ability to form open working relationships, especially in public sector (Larson and Drexler, 1997; Chan et al., 2003; Chan et al., 2008). This problem is not limited to the government departments alone; it happens even within partner's organizations. Public accountability policy in public sector may reduce flexibility to some extent which may hinder the successful implementation of partnering (Chan et al. 2006). Aarseth et al. (2012) reveal that lack of proper understanding of partnering concepts, the problem of establishing shared ground rules; inter-organizational relationships communication problem and ill-defined roles and responsibilities are the barriers to successful partnering implementation in the Norway and Canada construction industry. Ng et al. (2002) found that client inability to commit to attitudinal change partnering relationships and required implementation procedures and lack of sufficient technical and managerial competency on the part of the client or developers is a serious impediment to successful partnering in research conducted in Australia. Glagola & Sheedy (2002) and Kaluarachchi and Jones (2007) affirmed that lack required knowledge and skill of the working or the process of partnering by the participants is a great barrier to its successful implementation. Lack technical know-how is responsible for the practitioners' inability to translate general principles of partnering into the concrete application (Tang et al., 2006). Any organisation without the necessary skills is required to employ fresh hand or send the staff for training which some organisations are not ready to do (Hasanzadeh et al., 2014). Construction practitioners are expected to be equipped with skills and knowledge necessary to facilitate the implementation process, lack of these is a threat to the successful partnering implementation (Kaluarachchi and Jones 2007; Zuo et al., 2013; Chan et al. 2003).

One of the ingredients to the successful partnering is an adequate commitment, without this partnering project cannot see the light of the day. Lack of commitment among the project participants to the process is one of the problems confronting partnering implementation, this commitment must be a total for partnering implementation to be successful, but failure to provide this may cause a problem. Partnering attitudes cannot be developed without commitment, which is a serious challenge to the industry (Akintoye et al., 2000; Ng et al., 2002; Le-Hoai et al., 2010). Chan et al. (2008) discovered that uneven commitment is one of the major

difficulties confronted partnering implementation in Hong Kong railway extension projects. Although, having an even commitment in construction practice may be difficult due to different parties goals (Moore et al., 1992). Committed may be in the form of communication at the right time on issues. Failure to communicate may lead to problems resolution inefficiency which may invariably have an impact on the project success and contractor's budget. Communication is another critical aspect that affects the success of the partnering process. Poor communication could result in conflict and total connection breakdown which will affect the success of partnering.

Lorraine (1994) affirmed that public procurement regulation is one of the factors affecting the application of partnering in the UK public works sector. In addition, competitive tendering procurement arrangement in use in the construction industry is a barrier to partnering implementation because it does not allow flexibility and commitment (Ng et al., 2002; Bayliss et al., 2004). Partnering arrangement focuses on trust and cooperation rather than low bids price. A contractor that deliberately bid low to win the contract would move from a cooperative approach of win-win to a win-lose approach. He would be seeking for claims in any possible ways later for the project to be profitable. Glagola and Sheedy (2002) reveal that the cost of partnering is 0.15% of the total cost of the project. Unprecedented initial cost spent on partnering in aspects such as workshops, facilitator, performance monitoring, and so on are considered to be uneconomical, although it may have better benefits later (Hong et al., 2012). Parties that are already accustomed to competitive tendering as means of procurement which does not require these initial cost would find it difficult to believe.

Based on the excessive literature conducted above, it is worrisome to note that there is no such study conducted in Nigeria context whereas the constraints are the context in nature. In public projects, having transparency as their watch-word to justify this additional cost incurred may be difficult even though it may be small.

3 Methodology

In this paper, a quantitative approach via questionnaire survey was employed to elicit relevant information from the respondents who have participated in partnering project before. The survey preceded the extensive literature review of relevant materials relating to the partnering implementation. The questionnaire comprises of two parts, respondents demographic information is requested for in section A, while section B consists of factors

responsible for the slow adoption of partnering which is assessed using a Likert scale of 1 to 5. The practitioners were asked to state their level of the agreement with those identified factors on partnering implementation constraint where 1 represents strongly disagree, and 5 represents strongly agree. The Likert approach was employed in this study because of its merits in eliciting the respondent's agreement or disagreement on issues and allows for the easy determination of the respondents' hierarchical preference in line with (Fellows and Liu, 2015). Previous studies have adopted the five-point Likert scale in questionnaires design in similar studies (Chan et al., 2004; Dikmen et al., 2008.). Before administered the questionnaire to larger population five practitioners in the field who have handled partnering projects before and have above ten years working experience on partnering projects in Nigeria were presented with those factors established through the literature factors to ascertain their relevance to Nigeria context and to add omitted ones. After this process twenty-nine factors responsible for slow adoption were arrived at. The designed questionnaire was pilot tested with fifteen (15) respondents before proper field survey. This pilot study was undertaken to ensure that the questionnaire is clear, unambiguous in the meaning, well understood by all respondents, and to eliminate unnecessary questions (Rattray & Jones, 2007). After this pilot study, clean copy of the questionnaire that took care of earlier observation was produced, and the survey was self-administered. The pilot study is necessary for a for quantitative data analysis with large population size (Cheung, 2009).

The questionnaire was self-administered on construction practitioners using cluster and stratified random sampling techniques. A similar method had been used by (Yuang et al., 2009). The professionals in the country were clustered into geopolitical zones and stratified into the profession. In the Nigerian construction industry, the professionals are such as architects, quantity surveyors, project managers, structural engineers, mechanical and electrical engineers, contractors, and clients who participate in partnering projects from the design phase to the completion stage. Three geopolitical zones (Southwest, Northcentral, and Northwest) were purposely selected. The responses were grouped into the clients, contractors, and consultants, being the three recognized organization in the construction industry in the study area. List of the construction practitioners that had participated in partnering projects before was obtained from authorised desk officer in both the federal and state offices of Bureau of Public Procurement (BPP). The population of the respondent that have participated in partnering projects in

the three zones is 804. A set of 195 questionnaires were self-administered on the construction professionals who have participated in partnering construction projects in the three zones. Out of the 195 questionnaires administered only 113 returned represent 58%, which can be considered as reasonable.

The data obtained through the questionnaire were analysed with aids of the Statistical Product and Service Solutions (SPSS v22), and the statistical tools adopted are descriptive statistics, Kruskal Wali test, and factors analysis. The background information in the questionnaire would be analysed using descriptive statistics. Kruskal-Wallis test conducted to test if there is any significant difference in the perceptions of the respondents from the client, consultants, and contractors in the ranking of the factors. Kruskal-Wallis test conducted at a significance level of 5 percent. Kruskal-Wallis was used to test more than two items differences non-parametric data. Factor analysis adopted to determine the underlying relationships among the identified factors.

3 Data Analysis, Result, and Discussion

3.1 Background Information

Out of 113 returned questionnaires, 101 were analysed, 11 questionnaire dropped due to incomplete information. The breakdown of the responses received is 34 contractors, 43 consultants, and 24 clients. The respondents are (23.8%) clients; (33.7%) contractors, and (42.5%) consultants. The respondents are quantity surveyors, engineers, builders, and architects. About 13.9% of the respondents have less than five years of experienced, 19.8% have 5-9 years of experience, 26.7% have 10-14 years of experience, 25.2% have 15-19 years of experience, and 14.4% have more than 20 years of experience as shown in Table 1.

3.2 Ranking of factors responsible for slow adoption of partnering on projects execution

Table 2 shows the 29 identified factors responsible for the slow adoption of partnering as assessed by the clients, contractors, and consultants. Overall mean score values for the 29 factors range from 3.38 to 4.06; which implied that all the respondents agreed the identified factors were responsible for the slow adoption of partnering in Nigeria context. On the lists, lack of proper understanding of the partnering concept was ranked 1st with a mean score of 4.06. Difficulties in securing management and stakeholders commitment to the process had a mean score of 4.00 and ranked 2nd. The 3rd -ranked factor is the economic and

Table 1: Respondent's Background Information

Profession	%	Qualification	%	Experience (years)	%	Organization Type	%
Architect	21.8	PhD	6.9	Less than five years	13.9	Client organisation	23.8
Quantity Surveyor	26.2	MSc / MTech	22.3	5 to 9 years	19.8	Contracting organisation	33.7
Engineer	28.7	BSc / BTech / HND	60.9	10 to 14 years	26.7	Consultant organisation	42.5
Builder	23.3	PGD	9.9	15 to 19 years	25.2		
				Above 20 years	14.4		

financial with a mean score of 3.98. Lack of institutional framework and government policy is the 4th ranked factor with a mean score of 3.93. Unsuitable application of partnering is ranked 5th, with a mean score of 3.87. The perception of the industry on trust is ranked 6th with a mean score of 3.85. Unexpected expenses at the initial stage was ranked 7th with the mean score of 3.83. Furthermore, non-adherence fully to partnering principles is the 8th ranked factor with 3.81 mean scores. Commercial and external pressure on the parties is ranked 9th with the mean score of 3.80, and lack of predefined problem-solving mechanism is ranked 10th with a mean score of 3.79. The least three ranked factors responsible for slow partnering implementation in Nigeria are non-availability of required competency in the organisation, the unsupportive attitude of the labour union, and fear of the intimacy.

This study finding is at variance from Chan et al., (2006) finding in a study conducted in which lack of proper understanding of the process was ranked the sixth position. This study noticed lack of proper understanding of the new procurement system as a serious obstacle to successful implementation of partnering in Nigeria. The respondent ranked non-availability of the required competency low could be because they are involved they cannot pass a negative verdict on themselves since they are working in public sector if they are incompetent it may affect their job.

The second test was conducted to test if the three grouped of respondents agreed on the ranking. The results of Kruskal-Wallis test shown in Table 3 revealed that there is a statistically significant difference at a 5% significance level on the perceptions of the respondents on the four (4 out of 29) identified factors. These factors are difficulties of changing traditional culture to collaborative culture; difficulties to sustain continuous improvement; integrity

and ethics (corruption); and non-availability of required competency in the organization. The researcher is not surprised about the disagreement on these items since the respondents belong to different organisations with different roles and responsibilities, different partnering projects, and also individual with a different perception.

3.3 The factor analysis results on the test conducted on the factors

Factor analysis was adopted in this study due to number of variables involved to establish which of the variables are measuring the same underlying dimensions in line with Pallant (2010). Chan et al., (2004) successfully applied this technique in previous research. The internal consistency was first assessed through Cronbach's alpha to ascertain how well the variables correlated with each other. The test produced a Cronbach's alpha coefficient of internal consistency value (α) of 0.932 as shown in Table 4, a value greater than 0.70 minimum set as criterion. Pallant (2010), affirmed that the reliability of data is assessed based on the following criteria (α greater than 0.9 implied high reliability, $0.7 < \alpha < 0.9$ implies acceptable reliability, and low reliability is when α is below 0.35).

Other preliminaries tests called the measure of sampling adequacy to determine the suitability of the collected data for factor analysis were conducted such as sample size,

Table 3: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N of Items
0.932	0.932	29

Kaiser-Meyer-Olkin (KMO) test, and Bartlett’s test of sphericity, which test whether the correlation matrix is an identity matrix. According to Tabachnick and Fidell, (2007), size of the sample and strength of the relationship are two issues needed to be considered for factor analysis to be suitable. Although opinions of authors differ on the appropriate sample size, this study adopted those authors that said that the sample size should be ≥ 100 . In this study, the sample size is 101 which is greater than 100 specified and for the strength of relationship more than 60% are greater than 0.30. This study shows that these conditions have been satisfied.

To ascertain the appropriateness of this statistical technique, Tabachnick and Fidell, (2007) asserted that the KMO value should be ≥ 0.5 , and the associated significant level should be small (that is $P < 0.05$) for factor analysis to be suitable. The result of KMO value in this study is 0.904 which exceeds the 0.5 minimum value suggested as satisfactory for factor analysis. Bartlett’s test of Sphericity value in this study is 2462.759 and significance value of 0.000 at 5% level; this implies that the correlation matrix is not an identity matrix. Therefore it is robust and suitable for conducting factor analysis. This study tests results are presented in Table 5.

Furthermore, to identify the maximum number of factors to retain the scree plot test and eigenvalues criteria were used. Seven factors extracted based on these criteria as shown in Figure 1 (eigenvalue greater than 1 and scree plot test) and the orthogonal varimax rotation of principal component analysis was adopted for factors interpretation. The variables are in order of factors loading under each group. The principal components analysis show the factor loading for each of the 27 factors above 0.40, and only two that failed the loading test dropped. Therefore only 27 identified factors were significant. The extracted factors are named as shown in the rotated matrix (loading) of factors responsible for slow adoption in Table 6. The 27 factors grouped into seven principal components namely attitudinal and behavioural related factor; lack of technical

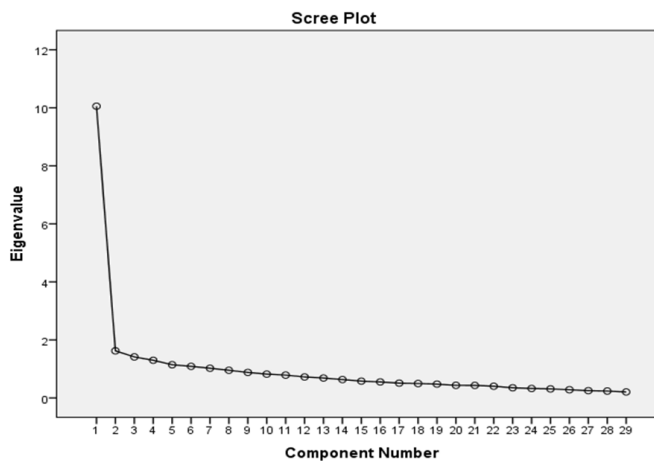


Figure 1: Scree Plot

know-how; external, economic, and institutional factors, procurement related factor, ineffective communication; unethical related issues; and lack of commitment.

Table 6 shows the seven principal components emerged and classified based on their factor loadings. The total variance explained by the seven principal components is 66.87%, and each component contribution is highlighted in Table 6. This study finding is tallied with Le-Hoai et al (2010) finding in which the 7 factor produced explained 70.1% of the total variance.

The first principal component is an attitudinal and behavioural factor; this component accounts for 40.67% of the total percentage variance. It consists of seven sub-factors namely, time required for the relationship to develop and mutual decision taken (0.770), fear of the consequences of intimacy and preference for legal binding document (0.664), incompatible culture (0.586), adversarial and exploitative ways of the industry (0.574), short-term nature of the project (0.517), non-inclusion of all key stakeholders (0.480), and difficulties of changing traditional culture to collaborative culture (0.468). Principal component two is a lack of technical know-how, which accounted for 5.60% of the total percentage variance. This component comprises of five sub-factors namely, inability to establish shared ground rules (0.710), a lack of pre-defined problem-solving process (0.681), a lack of proper understanding of the partnering concepts and principles (0.641), unclearly define roles and responsibilities (0.621), and non-availability of required competence and training (0.533).

The third principal component is aggregation of external, economic, and institutional factor. This component accounts for 4.88% of the total percentage variance. It

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.904
Bartlett's Test of Sphericity	Approx. Chi-Square	2462.759
	Df	406
	Sig.	0.000

Table 5: Rotated matrix (loading) of factors responsible for slow adoption of partnering

Principal components and factors responsible for slow adoption of partnering	Loading	Eigenvalues	% of variance	Cum. % of variance
Attitudinal and behavioural factor		10.055	40.672	40.672
Time for the relationship to develop	0.770			
Fear of the consequences of intimacy	0.664			
Incompatible culture	0.586			
Adversarial & exploitative ways of the industry	0.574			
Short-term nature of the project	0.517			
Non- inclusion of all key stakeholders	0.480			
Difficulties of changing from traditional culture to collaborative	0.468			
Lack of technical know-how		1.625	5.603	46.275
Inability to establish shared ground rules	0.710			
Lack of pre-defined problem-solving process.	0.681			
Lack of proper understanding of the partnering concept, process & principle	0.641			
Unclearly define roles and responsibilities	0.621			
Non-availability of required competence and training	0.533			
External, economic, and institutional factor		1.416	4.881	51.156
Commercial and external pressure on the parties	0.653			
Government policies and hostile environment	0.622			
Economic and financial barrier	0.468			
Procurement process		1.299	4.479	55.635
Uncertainty of the contract award and profitability	0.685			
Unexpected expenses at initial stage	0.564			
Usage of competitive tendering which inhibits flexibility	0.559			
Ineffective communication		1.144	3.945	59.580
Perception of the industry on trust	0.744			
Poor communication	0.671			
Unethical related issues		1.089	3.756	63.337
Bureaucratic system of organization/client	0.702			
Lack Integrity and ethics (corruption)	0.511			
Lack of cooperation due to divided interest of the parties	0.498			
Lack of commitment		1.024	3.533	66.869
Inability to adherence fully to partnering principles due to uneven commitment	0.751			
Lack of top management support and stakeholders commitment	0.571			
Difficulties in learning to do things differently	0.528			
Difficulties to sustain continuous improvement	0.434			

contains three sub-factors namely commercial and external pressure on the parties (0.653), the restriction imposed by the government and hostile environment (0.622), and difficulties in learning to do things differently (0.468). Procurement process is the fourth principal component. It accounts for 4.48% of the total percentage variance; it contains three sub-factors which are uncertainty in contract award and profitability (0.685), unexpected expenses at the initial stage (0.564), and usage of competitive tendering that inhibits flexibility (0.559).

Ineffective communication is the fifth principal component. This component accounts for 3.95% of the total percentage of variance. It contains two sub-factors namely, the perception of the industry on trust (0.744),

and ineffective or poor communication (0.671). Unethical related issues is the sixth component, which accounted for 3.76% of the total percentage variance; it contains three sub-factors, namely, bureaucratic system of organization/client (0.702), lack Integrity and ethics (corruption) (0.511), and lack of cooperation due differences in interest between parties (0.501). Principal component seventh is lack of commitment, this component accounts for 3.53% of the total percentage variance. This component contains four sub-factors namely, inability to adherence fully to partnering principles due to uneven commitment (0.751), lack of top management support and stakeholders commitment (0.571), difficulties in learning to do things differently (0.528), and difficulties to sustain continuous improvement (0.434).

3.4. Discussion

The industry participants have attitudinal and behaviour which may influence the level of implementation of partnering. Environment influences the people's behaviours and culture also manifest in behaviours, Nigeria is considered as high uncertainty avoidance value country has strong resistance to change which partnering implementation is all about. Nigerians being a country with high uncertainty avoidance cultural values, there is low tolerance for uncertainty such as partnering being a new procurement method relative to traditional method people are not too keen on it implementation since stakeholders do not want to gamble. In addition, the absence of rules, regulations, and framework guiding its implementation compounded the problem. Even when all things are put in place to implement partnering, with fear of uncertainty many people may not want it due to the nature of the industry and human-being, we always skeptical about change. In project partnering where different organizations come together, there is a need to adjust one another's culture for them to cooperate and achieve project goals.

The concept of partnering is relatively new in Nigeria; most practitioners find it difficult to understand the concept. Lack the technical knowledge of how best partnering project can be delivered is a serious problem in Nigeria which reduces the implementation rate. Apart from that there is no unified practical partnering model for implementation of construction projects. Some of the stakeholders do not know how the partnering would benefit their organisation, likewise the process; all these are affecting partnering implementation. The competent of the project team is paramount, and their selection should be strictly based on possession of the required skills and commitment to perform the task effectively.

Commercial pressure influences the attitudes and commitment of partners to the partnering arrangement. There is a need for the stakeholders to reach a balance between commercial interests and partnering attitudes (Chan et al., 2003). Furthermore, partnering implementation may be affected by government policies and regulations. Eriksson et al., (2008) pointed out the influence of policies in achieving successful partnering. Any country without supporting policy from the government may not succeed in partnering. The UK partnering gains its support from the governmental policies. Security challenges in certain parts of the country are a barrier to successful execution of partnering projects. The menace of Boko Haram insurgency in the North East region of the

country and the militant youths in the Niger Delta made these areas a volatile to undertake any developmental project such as partnering. In addition, the recent global economy crises due to falling in oil prices have impacted on the partnering implementation as benchmarks employed for determining prices are no longer realistic as exchange rate in the parallel market that used to be \$1 = N200 a year ago is now \$1 = N310.

Partnering came with a different system of procurement that did not support the usual conventional tendering cost and contract documents and those that see it an alien to the industry did not support it. Sorell (2003) asserted that partnering replaces the conventional procurement system with the performance measurement and improvement targets for costs, quality, and timeliness which is more flexible procurement system. Furthermore, the initial fund to be committed at an initial stage before benefits could be reaped discourages the adoption of the partnering (Hong et al., 2012). This fund is meant for activities such as partnering workshops and partnering performance monitoring activities. Some of the stakeholders only read that partnering is full of benefits but do not know how the partnering would benefit their organisations, likewise the process. These stakeholders would be skeptical of implementing partnering.

A partnering relationship requires a positive trust base atmosphere among all parties involved if this could not be guaranteed the partnering would slow or not exist. Ineffective or open communication may lead to distrust. Partnering relationship is affected by the level of trust; the partners would be willing to share their knowledge and resources if there is trust. The element of trust in partnering would ensure good working relationships, common goals, and resolving issues amicably. Existing perception of the construction industry on trust is another reason for the resistance to adoption of partnering. With the experience of mistrust associated with the industry partnering arrangement always face resisting cultural change. Lack of complete trust within construction partners and lack of communication and willingness to exchange information freely results in less collaboration that can reinforce partnering arrangement. For the partnering to succeed there should be behaviour and attitudes change on the level of communication, stakeholders should be open and honest in their communication. Scepticism should be discouraged. Information should be timely sharing and not hoard to resolve any conflict effectively and in time. Effective communication creates an atmosphere for open up and interactions which assist in partnering project success while

ineffective communication leads to project failure and nobody would like to associate with failure (Glagola and Sheedy, 2002).

Unethical issues slow down the progress of the partnering work. For instance, a bureaucratic organization slow and discourages the project partnering arrangement, because it prevents the formation of open and honest working relationships between the client and contractor organisation ((Ng et al., 2002). Corruption allegation within the contracting parties and clients organisation may harm the well-built relationship, and this is affecting the partnering implementation. The unnecessary administrative requirements are constraints to successful partnering implementation because it makes it difficult for the contractor to access and discuss project problem with the appropriate authority. This finding is in line with Ng et al., (2002) assertion that unnecessary administrative requirements discourage partnering implementation, especially in a public project. Furthermore, corruption is a major set-back for the construction procurements delivery system in Nigeria. The government made efforts by established anti-graft agencies to control this corruption, but politicians, highly connected, and heads of government agencies involved are frustrating the government efforts on these aspects.

The commitment of the top management of the project is an indication that the project worth implementation. The top management support and commitment come in the form of adequate people, time, money, expertise, and facilities, but failure to provide these may slow down the project. Without commitment, the project may be slow and fail at the end. Due to lack of commitment project key stakeholders do not turn up for the scheduled meetings or late without any genuine reason due to poor attitude to time. This behaviour usually causes a problem for projects, most especially those having a tight schedule.

The Nigerian's construction industry has a strong hierarchical structure which atime creates a problem for partnering projects, especially when a top person fails to convey down vital information to the operation level. In addition, atimes in the meeting project leaders are those expected to comments while the rest just listen without any comment (if they have the opportunity to attend the meeting) due to centralised power and decision making of the industry. Moreover, project leaders are expected to keep eyes on their worker to ensure they are working due to their poor-oriented work ethics, culture, and practices. In addition, approximately ten years after the procurement acts is passed in Nigeria the administration of the federal

government procurements are still under the Central Executive Council which comprised 70-80% politicians (Ogunsanya et al., 2016). With this approach politicians are still the one nominating the contractors that are loyal to them to handle the project. Furthermore, some procurement officers are in the government offices and some do not possess a broad knowledge of procurement. Atimes certain highly placed politician and government officials coerced the junior procurement officers to bend the procurement rules because of their status. All these ideas are not supporting partnering implementation and slow its implementation.

4. Conclusions and Recommendation

Traditional method is dominating the construction industry in Nigeria until now because construction practitioners are shy away from partnering implementation. As a result poor performance of partnering, Nigerians cannot reap the full benefits of partnering. This paper identified 29 factors responsible for the slow adoption of partnering in Nigeria. Among which are: lack of technical know-how, lack of commitment to the relationship, economic and financial constraint, the perception of the industry on trust, poor performance of the partnering, the restriction imposed by the government, and unexpected expenses at the initial stage. The factor analysis grouped the 29 identified factors into seven principal components namely altitudinal and behaviours factor; lack of technical know-how; External, economic, and institutional factor, procurement process; ineffective communication; unethical related issues; and lack of commitment.

For partnering project performance to be improved and attainment projects goals in future, it is important to imbibe in full the principles of partnering. If obstacles to successful partnering implementation are remove, a lot of partnering benefits will be gained. The issues relating to the facilitation and implementation of partnering can be resolved through stakeholders' commitment. The level of application of partnering could be improved by adopting the followings recommendations:

Stakeholders should be fully committed to the process and inculcate the partnering attitudes especially partnering project. If there is commitment from the stakeholders performance would improve and more people would be interested on it. There should be an awareness campaign to ensure a better understanding of the requirements of partnering implementation by organizing continuous training, workshops, and conferences. For a flexible procurement method such as partnering to add value to

product and improved performance it requires a radical change.

An interpersonal relation between the client and contractor is important to ensure a successful and smooth running of partnering implementation. Government also needs to review the procurement policies to accommodate the principle of partnering at the same time block the entire loopholes for corruption. For the partnering to succeed, there should be attitudinal change on the level of communication among stakeholders towards open and honest communication. Information should be timely share in order to resolve project issues as it occurred.

There should be a mechanism in place to encourage stakeholders on two-way trust required by partnering and training required for the change process to tackle any challenges of the change. One of the vital ingredients of ensuring a successful and smooth partnering implementation project is adequate training of workers, since poor performance is one of the reasons that discouraged partnering implementation. If participants are adequate train performance improvement would be achieved since the worker would be more competent to deliver. The findings of this study would be great benefits to the practitioners and policymakers within and outside Nigeria by provides guidelines for decision making and planning towards successful partnering projects implementation. In addition, would also encourage a better understanding of the partnering concept in the industry.

This study was conducted using questionnaire survey which is one of the limitations of this study; therefore future research should employ a more in-depth case study approach to evaluate partnering implementing challenges in the Nigerian construction industry. Another limitation of this study is geographical in nature; since this study covered only three out of the six geopolitical zones of the country, other zones should study and compare the result.

References

Aarseth, W., Andersen, B., Ahola, T., & Jergeas, G., (2012). Practical difficulties encountered in attempting to implement a partnering approach. *International Journal of Managing Projects in Business*, Vol. 5(2), pp. 266-284. doi: <http://dx.doi.org/10.1108/17538371211214941>.

Afolabi, E. Q. (2011). Examining Public Private Partnership in Nigeria: Potentials and challenges. Being A Long Essay Submitted To The Faculty Of Law, University Of Ilorin, Ilorin, Nigeria, In Partial Fulfilment of The Requirement For The

Award Of The Degree Of Bachelor Of Law (LL.B Hons) In Common Law.

Akintoye, A. (2015). PPP: Variations and Country Contexts. Keynote address 1 at the Faculty of Environmental Design and Management international conference (EDMIC2015) at Obafemi Awolowo University, Ile-Ife, Nigeria, March.

Akintoye, A., McIntosh, G. and Fitzgerald, E. (2000). A survey of supply chain collaboration and management in the UK construction industry. *European Journal of Purchasing & Supply Management*, Vol. 6 Nos 3-4, pp. 159-68.

Awodele, O.A., Ogunsemi, D.R. (2010). An Assessment of Success Factors and Benefits of Project Partnering in Nigerian Construction Industry. Published in CIB 2010 World Congress 2010. Published in CIB 2010 World Congress. www.academia.edu/.../An_Assessment_of_Success_Factors_and_Benefits_of_Project_Partnering_in_Nigerian_Construction_Industry.

Barlow, J., Cohen, M., Jashapara, A., & Simpson, Y., (1997). Towards positive partnering. The Policy Press, Bristol.

Bayliss, R., Cheung, S. O., Suen, H. C. H., Wong, S. P. (2004). Effective partnering tools in construction: a case study on MTRC TKE contract 604 in Hong Kong. *International Journal of Project Management*, 22(3):253–63.

Bentler, P.M (1990). Fix indexes, Lagrange multipliers, constraint changes and incomplete data in structure models. *Multivariate Behavioural Research*. 25(2), 163-172.

Black, C., Akintoye, A., Fitzgerald, E. (2000). An Analysis of Success Factors and Benefits of Partnering in Construction. *International Journal of Project Management*, 18, 423-434

Bresnen, M., & Marshall, N., (2000). Partnering in construction: a critical review of issues, problems and dilemmas. *Construction Management & Economics*; 18(2), pp. 229-237. doi: 10.1080/014461900370852

Chan, A. P. C., Chan, D. W. M., Fan, L. C. N., Lam, P. T. I., & Yeung, J. F. Y., (2006). Partnering for construction excellence—A reality or myth?. *Building Environment*, 41(12), pp. 1924–1933. doi:10.1016/j.buildenv.2005.06.026

Chan, A.P.C., Chan, D.W.M., Chiang, Y.H., Tang, B.S., Chan, E.H.W., Ho, K.S.K., (2004). Exploring critical success factors for partnering in construction projects. *Journal of Construction Engineering and Management*, 130(2), pp. 188–198. DOI: 10.1061/(ASCE)0733-9364(2004)130:2(188)

Chan, A.P.C., Chan, D.W.M., Fan, L.C.N., Lam, P.T.I., & Yeung, J.F.Y. (2008). Achieving Partnering Success through an Incentive Agreement: Lessons Learned from an Underground Railway Extension Project in Hong Kong. *Journal of Management in Engineering*, Vol. 24, No. 3, 128–137.

- Chan, A. P. C., Chan, D. W. M., & Ho, K. S.K., (2003). Partnering in construction: critical study of problems for implementation. *Journal of Management in Engineering*, 19(3), pp. 126–135. DOI: 10.1061/(ASCE)0742-597X(2003)19:3(126).
- Cheung, E., (2009). Developing a best practice framework for implementing public-private partnership (PPPs) in Hong Kong. Unpublished Ph.D. thesis, Queensland University of Technology, Australia.
- Cheung, S.O., Ng, S.T., Wong S.P., & Suen, H.C.H., (2003). Behavioural aspects of construction partnering. *International Journal of Project Management*. 21(5), pp. 333-343. doi:10.1016/S0263-7863(02)00052-2
- Cox, A. and Thompson, L. (1997). Fit for purpose contractual relations: determining a theoretical framework for construction projects, *European Journal of Purchasing and Supply Management*, Vol.3 (3), pp.127-135
- Dikmen, I, Birgonul, M. T, Ozorhon, B. & Eren, K., (2008). Critical success factors for partnering in the Turkish construction industry. In: Dainty, A (Ed) Procs 24th Annual ARCOM Conference, 1-3 September 2008, Cardiff, UK. Association of Researchers in Construction Management, pp.1013-1022.
- Egan, J., (1998). Rethinking Construction, HMSO, London.
- Eriksson, P.E., Nilsson, T., & Atkin, B., (2008). Client perceptions of barriers to partnering. *Engineering, Construction and Architectural Management*, Vol. 15(6), pp.527-539, doi: http://dx.doi.org/10.1108/09699980810916979.
- Fellows, R. F., and Liu, A. M. M. (2015). Research Methods for Construction, 4th Edition. John Wiley & Son Ltd publishing
- Glagola, C.R., & Sheedy, W.M., (2002). Partnering on defense contracts. *Journal of Construction Engineering and Management*, 128 (2), pp.127–138. doi:http://dx.doi.org/10.1061/(ASCE)0733-9364(2002)128:2(127)
- Hasanzadeh, S.M., Mujtaba Hosseinalipour, M., & Mohammad Reza Hafezi, M.R. (2014).
- Collaborative procurement in construction projects performance measures, Case Study: Partnering in Iranian construction industry. *Procedia - Social and Behavioral Sciences* 119 (2014) pp.811 – 818
- Hong, Y., Chan, D. W. M., & Chan, A.P.C., (2012). Exploring the applicability of construction partnering in Mainland China. *Facilities*, 30 (13/14), pp. 667 – 694. DOI:http://dx.doi.org/10.1108/02632771211270603
- Iboh, A.A., Adindu, C. C., Oyoh, A. J.(2013). Public Private Partnership Construction Project Disputes in Nigeria. *Journal of Research in National Development* Vol. 11(1), pp. 1-11.
- Kadiri, D.S., Ojo, S.O., & Jagboro, G.O., (2015). Implications of adopting public-private partnership for infrastructure development in Nigeria. *Journal of Sustainable Development*; Vol. 8, No. 9; pp 169-177. doi: http://dx.doi.org/10.5539/jsd.v8n9p169
- Kaluarachchi, Y. D., and Jones, K. (2007). Monitoring of a Strategic Partnering Process: the Amphion experience. *Constr. Manage. Econ.* 25(10): 1053-1061.
- Koralan, S.B. and Dikbas, A., (2002). An assessment of the applicability of partnering in the Turkish construction sector. *Construction Management and Economics*, Vol. 20(4), pp. 315-321. doi:10.1080/01446190210125554
- Kwan, A.Y. and Ofori, G. (2001). Chinese culture and successful implementation of partnering in Singapore's construction industry. *Construction Management Economics*, Vol. 19 (6), 619-632
- Larson, E., (1995). Project partnering: results of a study of 280 construction projects. *Journal of Management in Engineering*, 11 (2), pp. 30-35. DOI: http://dx.doi.org/10.1061/(ASCE)0742-597X(1995)11:2(30)
- Larson, E., & Drexler, J.A., (1997). Barriers to project partnering: Report from the Firing Line. *Project Management Journal*, 28(1), pp.46-52
- Lazar, F.D., (1997). Partnering-new Benefits from Peering inside the Black Box. *Journal of Management in Engineering*. 13 (6), pp. 75-83. Doi: http://dx.doi.org/10.1061/(ASCE)0742-597X(1997)13:6(75)
- Le-Hoai, L., Lee, Y. D., & Son, J. J., (2010). Partnering in construction: investigation of problematic Issues for Implementation in Vietnam. *KSCE Journal of Civil Engineering*, 14 (5), pp.731-741. Doi:10.1007/s12205-010-0916-8
- Loraine, R.K. (1994). (1994) Project specific partnering. *Engineering, Construction and Architectural Management*, Vol. 1 Issue: 1, pp.5-16, doi.org/10.1108/eb020989
- Meng, X., (2012). The effect of relationship management on project performance in construction. *International Journal of Project Management*. 30 (2012) 188–198 http://dx.doi.org/10.1016/j.ijproman.2011.04.002.
- Moore, C., Mosley, D., and Slagle, M. (1992) Partnering guidelines for win-win project management. *Project Management Journal* 22(1): 18–21.
- Ng, S.T., Rose, T.M., Mak, M. and Chen, S.E., 2002. Problematic issues associated with project partnering – the contractor perspective. *International Journal of Project Mgmt.* 20: 437–449. doi:10.1016/S0263-7863(01)00025-4

- Ogunsanya, O. A., Aigbavboa, C. O. & Thwala, D.W. (2016). Challenges Of Construction Procurement: A Developing Nation's Perspective. International Conference of Socio-economic Researchers ICSR 2016 SERBIA. Conference Proceedings. pp 205- 217.
- Ogunsemi, D. R., Oyediran, S. O. & Ekundayo, D.O. (2008). Construction professionals and project management competencies in Nigeria. *Journal of Construction*, 1(2): 6–11.
- Okereke, O. C., 2007. Project management: A strategic instrument for effective political governance and economic development. *PM World Today*, 9(6), pp.1– 17.
- Oluwaseun, O. & Odun, O., (2014). Public private partnership and Nigerian economic growth: Problems and Prospects. *International Journal of Business and Social Science*, 5 (11), pp. 132-139.
- Opawole, A., Jagboro, G.O., (2016). Benchmarking parties' obligations in the execution of concession-based PPP projects in Nigeria. *Journal of Place Management and Development*, 9(1), pp. 27-46. DOI: <http://dx.doi.org/10.1108/JPMD-08-2015-0029>
- Pallant, J., (2010). SPSS Survival Manual: A step by step guide to data analysis using SPSS for Windows, McGraw Hill, New York, NY.
- Rattray, J. & Jones, M. C., (2007). Essential elements of questionnaire design and development. *Journal of Clinical Nursing*, 16(2), pp.234-243. DOI: 10.1111/j.1365-2702.2006.01573.x
- Sorrell, S., (2003). Making the link: climate policy and the reform of the UK construction industry. *Energy Policy*, 31(9), pp. 865-878. doi:10.1016/S0301-4215(02)00130-1
- Stralkowski, C.M.,& Billon, S.A., (1988). Partnering: a strategic approach to productivity improvement. *National Productivity Review*, 7, pp.145-151. DOI: 10.1002/npr.4040070206
- Tabachnick, B. G. & Fidell, L. S., (2007). Using multivariate statistics. 5th edition. Boston: Pearson/Allyn & Bacon.
- Tang, W., Duffield, C. F, & Young, D. M. (2006). Partnering Mechanism in Construction: An Empirical Study on the Chinese Construction Industry. *Journal of Construction Engineering and Management*, Vol. 132, No. 3, pp. 217–229
- Yang, J. B., Yang, C. C., & Kao, C.K. (2010). Evaluating schedule delay causes for Private Participating Public Construction Works under the Build-Operate-Transfer Model. *International Journal of Project Management*, Vol. 28, pp. 569-579. DOI:10.1016/j.ijproman.2009.10.005
- Yuan, J., Zeng, A. Y., Skibniewski, M.J. & Li, Q., (2009). Selection of performance objectives and Key Performance Indicators in Public–Private Partnership Projects to Achieve Value for Money. *Construction Management and Economics*, 27(3), pp.253-270, DOI: 10.1080/01446190902748705
- Zuo, J., Chan, A., Zhao, Z., Zillante, G., & Xia, P., (2013). Supporting and impeding factors for partnering in construction – a China study. *Facilities*. 31(11-12), pp. 468-488. DOI: <http://dx.doi.org/10.1108/F-05-2012-0038>.