APPLICATION OF PUBLIC-PRIVATE PARTNERSHIP IN GOMBE STATE, NIGERIA: THE BARRIERS AND DRIVERS IN PRACTICE

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Abstract
The needs to provide adequate infrastructures, especially housings as well as to complement the efforts of government towards provision of basic amenities gave rise to the adoption of public-private partnership approaches by stakeholders. In Gombe State, the application of PPP recorded low implementation. Therefore, the study aimed at exploring the application of PPP within Gombe State for infrastructure's developments. Descriptive design by survey strategies used while the data collected through administered questionnaires to the core construction professionals. Sixty-six valid questionnaires returned and analysed using Mean, Relative Importance Index (RII) and Percentage Rank Agreement Factor (PRAF). The results showed that; more than 50% of respondent agreed to the need for PPP in infrastructural development especially in the area of housing, hospitals and schools. Also, the top three likely barriers when implementing PPP in Gombe State are high rate of corruption practice (MS=3.41), misunderstanding of the PPP concept (MS=3.27) and Lack of patronage/interest by general public (MS=3.25). Moreover, the most significant driver for implementation of PPP found to be favourable investment environment, transparency in the PPP procurement process and providing well-functioning regulatory frameworks. The study concludes that, when applying PPP for infrastructure development in Gombe State, the B-O-O-T or B-D approach is most suitable in the area of building or roads construction projects and further recommend the elimination or reducing of corruption to the barest minimum as well as creating awareness among the general public and stakeholders on PPP.

Key Word: *Public Private-Partnership, Infrastructure, Gombe, Application, Projects*

Introduction

The term infrastructure could be a generic term for primary structures and facilities that are essential to the generation of economic process and development in fashionable economies (Kadiri *et al.,* 2015). Also, in most developing countries, including Nigeria, the problem of inadequate housing has been a significant issue. As a result, housing delivery in most governments has remained a critical agenda (Sanda *et al.,* 2016). Therefore, one ways of achieving that is through the use of Public-private partnership (PPP) arrangement.

Public-Private Partnership (PPP) refers to a selected form of arrangement that involves a long-run agreement between non-public sector party and a government during which the private sector party designs, builds, finances and operates public infrastructure in exchange for a few sorts of payment (Fadeyi *et al.,* 2016). Previous researchers suggest that the initial idea for the use of PPP is to encourage the acquisition of the necessary infrastructure, in particular housing, among which (Otairu *et al.,* 2014; Sanda *et al.,* 2016). In addition, (Otairu *et al.,* 2014; Ateloye *et al*., 2016; Essia and Yusuf, 2013) argued that PPP is a means of overcoming the constraints that the general public sector faces in discharging its infrastructure obligations or funding a large amount of infrastructure needed by governments under financial, realistic and most convenient cooperative arrangements.

Additionally, PPP procurement introduced to accelerate the capability and quality of public services across the world (Ateloye *et al.,* 2016). Therefore, one can say that the public sectors have an ample means of acquiring land but lack sufficient finance fund to provide all the infrastructures while the private sectors have the available funds and capacity to execute the work within the shortest time at desired quality. The PPP infrastructure acquisition strategy is known as a useful tool for the procurement of public infrastructure within the public sector constraints (Otairu *et al.,* 2014). From afore discussion, the term PPP can be referred to a mutual relationship between public and private sectors aimed at providing needed infrastructures to communities in such a way that each partner is compositing the deficiency of the other for effective delivery.

Various governments, primarily Federal and some State adopt the use of PPP in meeting up the essential requirement of infrastructures, especially in housing construction. The public-private Partnerships have been in use for nearly twenty years in developed countries to improve infrastructures (Otairu *et al.,* 2014). In a recent study of Ibem *et al.,* (2018) argued that PPP formally adopted in housing provision in Nigeria. Studies indicates that PPP is usually utilised in housing projects with about 52- 67% recorded success in public housing area more than the other sectors (Sanda *et al.,* 2016). In addition, the availability of land and the viability of the funding arrangements are two choice factors thought of by each the public and private sector operators of PPP housing projects in Nigeria (Ibem *et al.,* 2018).

Globally, the application of PPP have been widely generated attention and acceptance, especially in developed and developing countries like Nigeria, India, Ghana, USA etc. Nigeria is one amongst the numerous countries that have adopted PPP within the provision of housing at various levels of state across the country (Sanda e*t al.,* 2016). Even though the adaptation is relatively average or low as asserted by Adeogbo and Taiwo (2011) cited in Sanda *et al.* (2016). Also, the Nigerian PPP has not performed to an adequate degree to be compared with the general best application of excellent governance of PPP in acquiring infrastructures (Ateloye *et al.,* 2016). Moreover, it has widely accepted that the PPP choice is yet to be utilised for the building and management of infrastructures in Nigeria (Essia and Yusuf, 2013). Reviewed of several studies in Nigeria shown that PPP is being applied

by both the federal and state governments in housing and other sectors and that Lagos is the leading Nigerian user of PPP in comparison to the rest of Nigerian states. These can occur probably because of their composition in almost every aspect as a centre of excellence. It is with this in mind that the State Government of Lagos instituted Lagos State PPP Projects as an agency, which is called the State Lagos Public-Private Partnership Office.

In addition, it has been reported that the application of PPP is somewhat successful but confronted with some challenges that impede the implementation of the PPP from both sectors. It was widely reported that PPP application suffers many challenges that inhibit effective implementation, especially in Nigeria. Notably barriers includes high rate of corruption in government, inability to stick to the terms and conditions of the agreement, dearth of funding, lack of transparency and effective planning (Ateloye *et al.,* 2016; Otairu *et al.,* 2014; Sanda *et al.,* 2016; Umar and Tubosun, 2016; Fadeyi *et al.,* 2016; Bamidele *et al.,* 2015). Furthermore, its poor adaptation by states may be due to reported challenges or poor awareness of the benefits, successive criteria and insufficient information on PPP application in Nigeria. Therefore, the study is intended to conduct an exploring studies on the application of PPP in Gombe State. To do so, the following question was raised, and answers have been sought;

  i. What is the appropriate PPP approach and area suitable for Gombe State in Nigeria?
 ii. What are the barriers for implementation of PPP in Gombe State in Nigeria?

iii. What are the key drivers for effective application of PPP in Gombe State of Nigeria?

Methodology

The study used descriptive and exploratory research design through survey strategies and a structured questionnaire as means of data collection. The study population are the core construction professional and the list obtained from respected professional bodies as 100. The sample size determined from Kercy and Morgan table as 80, which serve as the number of questionnaire sent. Eighty questionnaires sent to the respondents through online google forms to construction professionals within Gombe State.

The study utilize both descriptive and inferential statistics such as percentages, mean, standard deviation and relative important index RII. The formula for the relative importance index (RII) for each of the questions shown in equation 1, which was used to find out the relative index by (Olomolaiye *et al.,* 1987; Chan and Kumaraswamy, 1997) as cited in the work of Waris *et al.* (2014).

RII = $\Sigma W / A*N$……………………….1

Where W shows the weighting that is assigned to each variable by the respondent, A is the highest weight and N is the total number of respondents. The RII value ranges from 0 to 1, with 0 not inclusive. It shows that higher the value of RII, more important was the variables are and vice versa.

Furthermore, Rank Agreement Factor (RAF) and Percentage Rank Agreement Factor (PRAF) was used to quantitatively measure the agreement in the importance ranking among the respondent area of specialisation as its used in the study of

Leje *et al.,* (2019). The formula is given as;

RAF = £QEAB/N ……………………..2

PRAF = $(RAF_{max} – RAF_{ij}) / RAF_{max}$ 3

Where RAFmax = maximum RAF, N = total number of factors, and QEAB = sum of the order of the groups. The RAF can be >1, with a higher factor implying greater disagreement while an RAF zero implies perfect agreement.

Result and Discussions

Demographic Information of the Respondents

The demographic profiles of the respondents are paramount to the researcher in judging the responses of the respondents. Therefore, the study depicts the profile information of the respondent through the questionnaire survey and the analysis carried as shown below;

Table 1: Analysis of Demographic Information of the Respondents

QUALIFICATIONS				
	Frequency	Percent	Valid Percent	Cumulative Percent
HND	9	13.6	13.6	13.6
BSC	11	16.7	16.7	30.3
PGD	9	13.6	13.6	43.9
MSC	32	48.5	48.5	92.4
Ph.D	5	7.6	7.6	100.0
Total	66	100.0	100.0	
PROFESSIONS				
Builder	30	45.5	45.5	45.5
Architects	6	9.1	9.1	54.5
Q/surveyor	18	27.3	27.3	81.8
Civil Engineer	12	18.2	18.2	100.0
Total	66	100.0	100.0	
YEARS OF EXPERIENCE				
1-5yrs	18	27.3	27.3	27.3
6-10yrs	18	27.3	27.3	54.5
11-15yrs	19	28.8	28.8	83.3
Over 15yrs	11	16.7	16.7	100.0
Total	66	100.0	100.0	
AREA OF SPECIALIZATION				
Client	21	31.8	31.8	31.8
Contractor	32	48.5	48.5	80.3
Consultants	13	19.7	19.7	100.0
Total	66	100.0	100.0	

From the descriptive analysis in Table 1 above, the respondent possesses require requisite quality to provide qualitative and reliable information on the topic. The majority of the respondent of about 70% attained a higher qualification at postgraduate level within the area of disciplines with MSc 48.5% representing 32 respondents as the highest qualification obtained by respondents. Moreover, Builders constitutes majority with 45.4%

representing 30 respondent then followed by Quantity Surveyors with 27.3% representing 18 respondents. Also, contractors and client dominate the highest specialisation among the respondents and that the average years of experience range from (1-15) years with the majority have (11-15) years of experience within construction industry. Furthermore, the implication of this finding indicates that correct data

collected from the right respondent with essential characteristics to give out reliable and valid information on public private partnership in Gombe State of Nigeria.

PPP Approach and Area of Interest for Application

In order to determine the suitable PPP approach and area of application in Gombe State, the various PPP approach identified from the literature were subjected to respondents to choose the right one based on experience and peculiarity nature of Gombe state. The result was analysed and presented in the chart below;
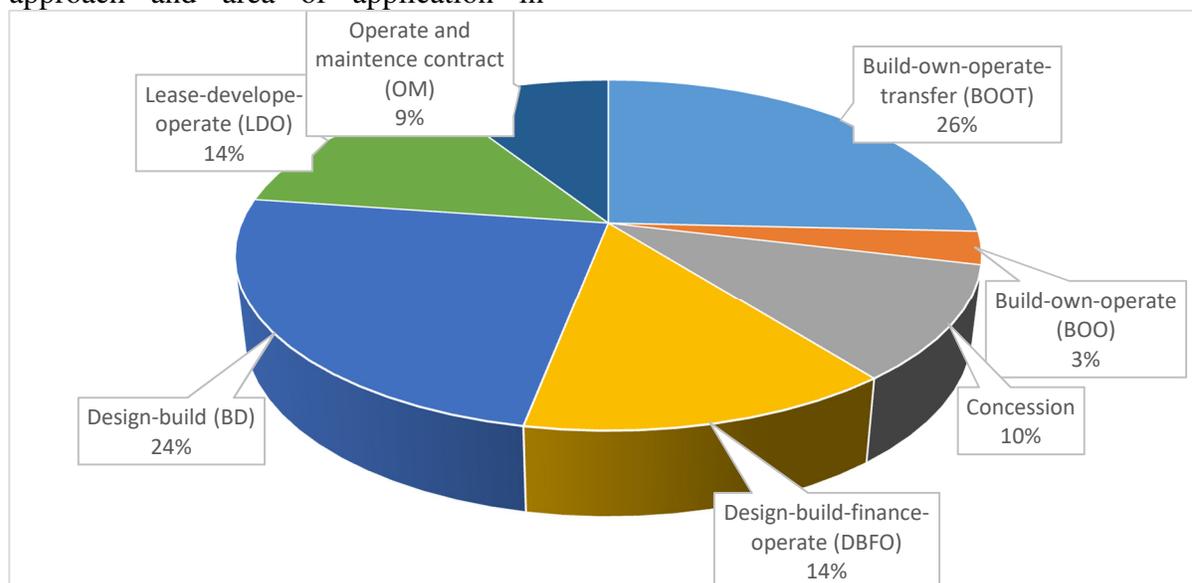

Fig. 1: Assessment on the choice of appropriate PPP in Gombe State, Nigeria

From the above, it is clear that the respondents think of adopting Built-own-operate-transfer (BOOT) and Design-build (BD) which represent 26% and 24% of the respondents as the appropriate and most suitable PPP approach in Gombe State of Nigeria. Moreover, to determine the suitable area that requires urgent attention of PPP in Gombe State, the respondents were asked to indicate using open-ended questions the appropriate area of needed attention for PPP application in Gombe state. After sorting out the numerous and repeated ones as indicated by the respondents, the study was able to identify the top area of interest to include; housing, hospitals, schools and roads

infrastructures. Therefore, the implication of this finding is that when applying PPP for infrastructure development in Gombe State, the stakeholders might likely either use B-O-O-T or B-D approach in the area of building or roads construction projects.

Barriers for PPP Application

In order to determine the likely barriers to implementation of PPP in Gombe state, the study identified fourteen challenges of PPP from the literature and subjected it to respondent for assessment using five-point Likert scale ranging from 1=strongly disagree and 5=strongly agree. The analysis carried out using descriptive and inferential statistics as shown below;

Table 2: Analysis of Barriers for Implementation of PPP in Gombe State

	Sum	SD	Mean	Level of agreement	Anova Sig. Level.
Lack of consensus among policymakers	208	1.099	3.15	AGREE	.155
high rate of corruption practice	225	1.265	3.41	AGREE	.130
Inconsistent government and legislative policy	192	1.274	2.91	NOT AGREE	.017
Lack of clear government policy on infrastructure	180	1.247	2.73	NOT AGREE	.033
Inability to adhere to terms and conditions of the agreement by parties.	200	1.136	3.03	AGREE	.011
Political instability	199	1.045	3.02	AGREE	.002
Lack of transparency, fairness and accountability	211	1.099	3.20	AGREE	.002
Lack of provision to mitigate unanticipated variations.	198	.841	3.00	AGREE	.007
Misunderstanding of the PPP concept	216	1.296	3.27	AGREE	.379
lack of adequate security	174	1.118	2.64	NOT AGREE	.000
High participation costs and a dearth of financing	188	1.125	2.94	NOT AGREE	.014
lack of experience in project financing by bank officials	176	1.100	2.67	NOT AGREE	.339
Lack of effective planning	191	1.204	2.89	NOT AGREE	.673
Lack of patronage and interest by general public	211	1.323	3.25	AGREE	.642

Multiple Comparisons (Anova Post-Hoc)					
(I) year of experience	(J) year of experience	Mean Difference (I-J)	Std. Error	Sig.	
1-5yrs.	6-10yrs	-3.137	3.48140	.804	
	11-15yrs	-9.725[*]	3.48140	.034	
	Over 15yrs	-1.121	3.93955	.992	

In order to decide on whether an identified barriers as evaluated by the respondent, should be accepted as the likely barrier to the implementation of PPP within the area of study, the researcher chooses to mean cut-off point of 3.00 (1+2+3+4+5 = 15/5 = 3.00). Thus, a questionnaire item with mean score of 3.00 or above was considered as Agreed while an item with less than 3.00 as Not Agreed as shown above. As illustrated in Table 2 above, the findings revealed that out of the 14 barriers assessed, eight (8) found to be agreed while the remaining ones are not agreed by the respondent in the study area. Therefore, the top three

likely barriers to be encounter when implementing PPP in Gombe State includes high rate of corruption practice (MS=3.41), Misunderstanding of the PPP concept (MS=3.27) and Lack patronage and interest by general public (MS=3.25) all attained insignificant difference on respondent perceptions based on years of experience. The finding agreed and supported the outcomes of Oteru *et al.* (2014), Sander *et al.* (2016) and Umar and Tubosun (2016) which indicate corruption as the major challenges affecting PPP application in Nigeria. Furthermore, the finding slightly disagree with Fadeyi *et al.* (2016) and Bamidele *et al.* (2015).

In addition, a parametric test with ANOVA post hoc analysis was carried out to investigate if there exist differences among the perception rating of barriers for PPP implementation by respondents' years of experience in construction industry. According to Pallant (2011) if sig value is less than or equal to 0.05, there exist a significant difference and sig value above 0.05 show insignificant differences among the respondents. From Table 3 above, eight (8) barriers show significant differences among respondent perception based on years of experience as their value were below the threshold of 0.05 while six (6) barriers indicate insignificant difference among the respondents. Therefore, to determine where the significant difference occur within the respondent years of experience. A one-way between-groups analysis of variance was conducted to explore the influence of respondent years of experience on assessing the likely barriers of PPP in the study area. The results show that majority of barriers reaches a statistical significance along the years of experience. The test indicated that the mean score for respondent with (1-5years) was significantly different from respondent with (11-15years) @ 0.034 sign level. While respondent with (6-10) and above 15 years of experience did not differ significantly from either group of respondents on the level of agreement on barriers for PPP implementation in Gombe State of Nigeria.

Drivers for PPP Implementation in Gombe State

In order to determine the important relative index of the drivers of PPP application in Gombe State, the eleven identified variables were subject for assessing by respondent using the five-point Likert scale from 1= not important

to 5=highly important. The results presented below.

As illustrated in Table 3 above, eleven drivers were subjected to analysis by the respondents to determine the most significant drivers for PPP implementation in Gombe State using relative important index and rank agreement factors. In order to decide on whether an identified drivers as evaluated by the respondent, should be accepted as significant driver for the implementation of PPP within the area of study, the researcher chooses a PRAF cut-off point of 50%. Thus, a questionnaire item with 50% or above was considered as *significant driver* while an item with less than is not significant. Therefore, the most significant driver for implementation of PPP in Gombe State are favourable investment environment (72.88%), transparency in the PPP procurement process (61.86%), providing well-functioning regulatory framework (61.86%) and creation of a sustainable long-term financing mechanism (61.86%) respectively. Moreover, the study supports the findings of Babatunde *et al.,* (2016) and Sanda *et al.,* (2016) while is partially agree with the suggestion of Essia and Yusuf (2013) and Ateloye *et al.,* (2016). Therefore, the implication of this finding is that the stakeholders could use the identify drivers for ensuring effective implementation of PPP within Gombe State.

Furthermore, a non-parametric test using Kruskal-Wallis Test was carried out to investigate if there exist differences among the respondents along the area of specialisation on the effectiveness of drivers for PPP implementation by respondents' area of specialisation in construction industry. According to Pallant (2011), if sig value is less than or

equal to 0.05, there exists a significant difference and sig value above 0.05 show insignificant differences among the respondents. From Table 3 above, the Sig value of 0.068 shows an insignificant difference among the rating of driver by client, contractor or consultants on the relative importance of the drivers toward effective implementation of PPP in Gombe State.

Table 3: Important Relative Index of Drivers for PPP Implementation

	Clients		Contractors		Consultants		Ranks Agreement Factor			
	RII	Rank	RII	Rank	RII	Rank	SR	RAF	PRAF	Ranks
Transparency in the PPP procurement process.	0.85	4	0.80	1	0.71	5	10	0.90	61.86%	2
Providing well-functioning and workable regulatory framework.	0.93	1	0.77	4	0.71	5	10	0.90	61.86%	2
Creation of a sustainable long-term financing mechanism.	0.91	2	0.73	6	0.77	2	10	0.90	61.86%	2
Accessible data bank on stakeholders' experience in PPP	0.77	7	0.68	9	0.63	8	24	2.18	7.63%	8
Engagement of stakeholders for effective management control and good governance.	0.81	5	0.79	2	0.74	4	11	1.00	57.63%	5
Establishment of specialized PPP agencies for key infrastructures.	0.70	10	0.68	9	0.71	5	24	2.18	7.63%	8
Establishing project economic viability	0.73	9	0.67	11	0.83	1	21	1.91	19.07%	6
Favorable investment environment.	0.87	3	0.79	2	0.77	2	7	0.64	72.88%	1
Simplified procurement process	0.76	8	0.71	7	0.54	11	26	2.36	0%	11
Guarding against incessant policy changes.	0.80	6	0.71	7	0.60	9	22	2.00	15.25%	7
Decentralisation of PPP designing and implementation	0.63	11	0.77	4	0.55	10	25	2.27	3.81%	10

KRUSKAL WALLIS TEST DIFFERENCES AMONG RESPONDENT ON DRIVERS FOR PPP

Specialisations	N	Mean Rank	Chi-Square	Asymp. Sig	DF
Client	21	39.88			
Contractor	32	33.06	5.372	**0.068**	2
Consultants	13	24.27			

NB: RII= Relative important index, SR= Sum of the ranks, RAF= Rank agreement factor, PRAF=Percentage rank agreement factor…..

Conclusion and Recommendation

The study reviewed the PPP concepts, challenges and drivers within Nigerian construction industry and subjected to assessment by construction professionals within the study area. This study contributes to the body of knowledge by providing an in-depth understanding of the barriers and drivers for practical implementation in Gombe State. The study concludes that, when applying PPP for infrastructure development in Gombe State, the B-O-O-T or B-D approach is most suitable in the area of buildings and

roads construction projects. Moreover, the high rate of corruption practice, misunderstanding of PPP concept and Lack patronage/interest by general public were the significant factors that inhibit PPP implementation within the study area. The study recommends that; Government should extend its anticorruption strategies to that sector to eliminates or reduce corruption to the barest minimum, stakeholders should engage in massive awareness to the public on the needs of adopting PPP as practical means of providing infrastructures by the government. And there is a need for further studies on why the level of PPP adoption is relatively low in Northern Nigeria as compared with southern parts of the country.

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