

EVALUATING THE MAJOR BARRIERS TO THE IMPLEMENTATION OF PPP FOR HOUSING PROJECTS IN SOUTH EAST NIGERIA

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Abstract

The well programmed land and housing polices meant to achieve a sustainable economic development has been so bottlenecked that they have become almost abandoned despite being paper-splendid. This has resulted in seeking for alternative to a sustainable housing delivery system that birthed a Public-Private Partnership that has become a global phenomenon for economic development. Though being a globally acceptable tool for the enhancement of housing delivery, it is still having numerous challenges in its operation. This study therefore evaluates the major barriers to the implementation of Public-Private Partnership (PPP) for housing delivery in South-East with the aim of proffering solutions to housing delivery needs. Information for this research work was gathered from different stakeholders in housing delivery wherein survey research design was adopted for the study. A sample size of 344 professionals were selected using purposive sampling technique. Data collection was done with a validated questionnaire survey and data was analyzed using IBM SPSS version 28. Factor Analysis (Principal Component Analysis - PCA) and Chi Square were used to test the hypothesis. Findings from the study reveal that 31% of the housing projects in the South-East were executed with PPP and professionals (88%) have good knowledge of PPP in housing delivery in the South-East. The PCA with a cumulative percentage of 90% identified 8 components (factors) which include Regulatory, Risk management, Complacency, Community engagement, Cultural, Technological, Economic and Political factors. These factors pose a great barrier to the implementation of PPP for housing deliver. The barriers identified are due to more to the public than the private. Therefore, the study recommends that beyond the need for stronger collaboration between the public and private sector, government should integrate the people in planning phase of every conceived housing project for a sustainable housing delivery. The Memorandum of Understanding (MoU) for each project must build in flexible rules to protect both parties against inflation and give room for renegotiation, investment recovery and economic instability. Also, government should build confidence and trust in the parties to PPP by creating enabling environment that can guarantee investors security.

Keywords: Barriers, Housing Delivery, Public-Private Partnership

Introduction

Housing project delivery, supply, provision, affordability, deficit, adequacy, etc. has been an issue of concern to public and private

sector as it directly or indirectly affects the performance of other sectors of the economy. Abraham, Adeboye, and Aderonmu, (2014), Aruma, and Hanachor, (2017), Almusaed, and Almssad, (2022), Taiwo and Adeboye (2013) and Ugonabo, (2023) ascertained that the role of housing provision in general is imperative to economic development and productivity. The public and private sectors have put their individual efforts to satisfy this pressing housing need but the financial constraint has limited all these efforts from fulfilling the desired goal. Keke, Egolun and Emoh, (2021), attested that despite having good policies, the financial system for housing delivery has been underdeveloped leading to loss of funds by the government.

Meanwhile, in the bid to proffer solution to housing delivery, the United Nations (2016) recommended Public-Private Partnership (PPP) (which is one of the Sustainable Development Goals (SDG)) as a way-forward to economic development. This has given a global popularity to PPP and has become acceptable in many economic development projects. Owotemu, Daniel, and Abubakar, (2022) traced the reason for the popularity and adoption of PPP as a global phenomenon to under performance of Government Budgeting, poor risk management capacities and lack of sufficient funding available to government for financing different strategically important and economic development focused projects (including Social Housing).

In the overall, it is either public or private sector that carries out any form of development independently but their sole independent incapacitation birthed the collaboration of both to Public-Private Partnership. Ugonabo, (2023), Owotemu, Daniel and Abubakar, (2022) and Olumuyiwa and Abraham (2011) and many other authors attested to the global impact of PPP in economic and social development particularly in housing delivery. Apart from these financial constraints, PPP has

witnessed a number of constraints just like some of the land/housing policies in their implementations and operations which hinders the successful completion of some housing projects in the South-East. It is expected that housing implementation mechanisms and tools be harnessed to fit into actualizing the same sustainability goals. This is the focus of this research work. The envisaged problem as seen in most works is more to human factor than the PPP implementation Models. It therefore evaluates the barriers to the implementation of PPP for housing delivery in South-East with the aim of addressing housing need through PPP.

Literature Review

Public-Private Partnership (PPP) and housing delivery/development in Nigeria

Public-Private Partnership (PPP) has become a global concept to addressing most economic development goals. The United Nations goal on making the world a better place incorporated PPP as a sustainable tool to economic development. It was tagged the seventeenth point agenda in achieving the SDGs for the whole world. Although efforts have been made by different sectors in addressing housing need in the past through formulation of different policies. Waziri and Roosli (2013) analysed the effort of both public and private sectors on their respective basis through formulation of policies like National Housing Policy (NHP), National Housing and Urban Development Programme (NHUDP), National Housing Fund (NHF), Creation of Housing Corporations in different states and so many other programmes, all focused on housing provision for economic development. Although these policies have made a number of success as facilitators and enablers but these policies were meant to permanently solve the housing gap which if it had succeeded there will be no need for seeking alternatives to housing delivery today. Jiboye

(2009) and Ibem and Azuh (2011) ascertained that in spite of these policies, organisations and regulations which the Nigerian governments have put in place, there is still acute shortage of housing accommodation in most urban cities in Nigeria. Ugonabo, Egolum, and Sado (2023), affirmed that Land Policy which should be the basic legal framework for land administration in Nigeria has not resolved the fundamental problems underlying the sustainable development of the land economy and related sectors. This is part of the reasons behind the shortfalls in housing delivery. This is in support of many authors that have pointed out on the implementation challenges of different policies connected to housing delivery.

The private sector's participation in housing delivery in Nigeria comprises both the formal and informal segments have been the machinery for most economic development. Their individual contribution, though significant, yet the policies around their operation still affect productivity. Keke, Egolum and Emoh, (2021), commented on the good paper policies without adequate financing support system to backup private sector for affordable housing delivery. The public sector being the popular sector, yet the pressure for housing need could not be addressed as the small private owners and rentals took over the market from the public sector. Ogunbayo, Alagbe, Ajao and Ogundipe (2016) noted that Small-scale private landlords in rental housing dominate the same (popular) informal-sector supply of urban housing. Daramola, Alagbe, Aduwo and Ogbiye (2005) in agreement, that the informal and formal segments have been the machinery for housing delivery in the country and suggested that the New Housing Policy of the Federal Government of Nigeria in consonance with the United Nations' Agenda 21 upholds PPP as the acceptable machinery for increase in stock for housing delivery. This has given PPP a global

recognition which Owotemu, et al (2022) affirmed that the popularity gained in PPP as a global phenomenon was as a result of underperformance of government budget and poor risk management capacity. PPP is therefore, an alternative to increase housing and infrastructure delivery as sole private and public sector are cost ineffective and burdened with other financial facet respectively.

In the overall, it is either public or private sector that carries out any form of development independently but their sole independent incapacitation birthed the collaboration of both to PPP. PPP in housing delivery is promoted on the assumption that it encourages multi-sartorial participation, increases housing stock, promotes sustainability in housing development, increases accessibility and timely delivery of housing to citizens (UN-HABITAT, 2007; Shelter Afrique, 2008; United Nation 2016. AFDB, 2023). Also the 17th number of the Sustainable Development Goal (SDG) reorganises PPP with regards to pursuing the same goal as a means of having a sustainable environment that promotes economic development and growth. Convinced by these apparent benefits, the government of Nigeria adopted PPP as a key policy in a bid to promote sustainable development through increase housing delivery and sustainability for all Nigeria. The Federal Government of Nigeria (FGN) has keyed in into this platform by involving the Federal Ministry of Land, Housing and Urban Development (FMLHUD) to collaborate with key actors and operators on housing sector through the establishment of viable partnership with private sectors. This was as a result of shortfall in housing delivery that have posed much deficiency to economic growth and development in Nigeria.

Barriers to the implementation of PPP in housing delivery

Despite government and major stakeholders officially embracing PPP for housing delivery, there are still underlying factors beneath its operations that have made its result not as feasible as it is seen in most developed countries like UK. Cheng, Wang, Xiong, Zhu, and Cheng (2021), established the basis for PPP implementation to vary according to the dimensions of driving force, subject, process, and object. And further proposed a three dimensional approach or three phases namely PPP1.0, PPP2.0, and PPP3.0, as a conceptual framework approach for sustainability-oriented PPP. These approaches can vary depending on the location of its operation as it may not be suitable in Nigeria situation being a developing country. Also the approach can be more peculiar to environmental and social perspective than economic perspective. Yakubu, Natalia and Mallo (2017) examined the effectiveness of PPP for Housing delivery in the Northern Region, Nigeria and observed that the level of success varies from one country to the other due to economic, political and cultural variations. These are some of the reasons noted for poor implementation of PPP in the Northern Region. This implies that the achievements recorded are far below the expectations. Some of the projects signed were never implemented and some few that were started were not completed. Although some of the projects could be regarded as successful, not all met the standards set for housing delivery. This ineffective performance of PPP in the area of housing delivery may not be unconnected with the constraints bedeviling the implementation of the concept in Nigeria. Most of the authors, Ugonabo (2023), Yakubu et al (2017) pointed out that the major constraints to effective implementation of PPP in housing are lack of strong political will. This was also reported in (Abdullahi and Aziz, (2011) as one of the major setbacks to successful implementation of PPP in housing projects. In the ranking of various factors in PPP operation and adoption, Ugonabo,

(2023) ranked Political factors as highest as against other factors. See table below.

Table 1: Ranking of factors affecting PPPs implementation

Code	Factors	Mean (MC)	Rank PLF
PLF	Political	4.28	1 st
PF	Project	4.24	2 nd
FF	Financial	4.22	3 rd
EF	Environmental	4.17	4 th

Source: Ugonabo (2023)

Ugonabo, (2023) as analysed from the above table, political (4.28) and project (4.24) are the highest measured factors that compel the adoption of PPPs in Niger State and made Political and project factors to pose great risk to implementing PPPs in Niger State. Financial and environmental factors with mean scores of 4.22 and 4.17 respectively also have significant influences on PPPs implementation in the State which is also a strong indicator to influence the adoption of PPP in the area. Yakubu *et al.* (2017) emphasized lack of government commitment in fulfilling their obligations as a challenge to a successful implementation of PPP in Bauchi. This agrees with Ugonabo (2023) and Abdullahi and Aziz, (2011) on the political will prevailing as a barrier to the implementations of PPP. Ihome, Effiong and Ekung (2015) also partly attributed the challenges of PPP to the lack of political will and poor political implementation.

On the contrary, Li, Akintoye, Edward and Hardcastle (2005), “carried out a study on allocation of risk in PPP/PFI construction projects”, and analysed three-tier structure of risks factors as a major barrier in implementation of PPP projects where risk is measured in different levels. This three-tier structure is made up of micro, macro and meso (level) risks. The micro level risks explore the uncertainty factors within a PPP organization. The macro level risks refer to the ecology variables, while the meso risk factors fall between the macro and micro levels. Ibrahim, Price and Dainty (2006)

identified 61 risk factors and classified these risk factors to the PPP operation into exogenous and endogenous where the former refers to risk that are external to the particular project while the latter is associated with risk at the boundaries within the system between stakeholder as a result of inherent practice between the working practices of the public and private sector. In every successful PPP, all forms of risk must be considered from conception as to ameliorate the barriers at the implementation stage of every PPP for housing delivery.

Onyemaechi, Samy and Pollard (2015) identified and examined the factors for the implementation of PPP in sustainable housing provision and linked it to eleven factors. The study recommends that government in contracting out the PPP housing projects should ensure that the private developer is strong and financially capable of taking up the projects. The private developer must have proven record of quality and timely delivery.

Oladokun and Aluko (2012) ranked social factors as the highest in the implementation of PPP, emphasizing that PPP basic intention was meant to address social need in most developing countries where provision of mass urban housing infrastructure is a necessity. Muhammad and Johar (2018) posited that in the implementation of PPP, success and failure factors are the primary to the operation of PPP for project delivery and outlined different challenges based on the PPP housing programme in Abuja FCT Nigeria which was designed to enhance the participation of private sector at both planning and implementation stages. Amongst the barriers listed, lack of transparency and competitiveness was a challenge as land allocation was done indiscriminately despite the guideline stipulation.

Though the above mentioned factors affect the implementation of PPP for housing

delivery, (Ibem and Aduwo, (2012), Abdullahi and Aziz, (2010), Dahiru and Muhammad (2015) Yakubu *et al.* (2017), Muhammad and Johar (2018) and Ugonabo, (2023) still mentioned some other factors such as poor compensation plan, access to land accessibility, insincerity among partners, corruption, funding constraints, regulatory constraints, lack of experience in PPP, engaging projects that do not suit PPP, lack of basic infrastructure, selection of wrong partner and high cost of social amenities, constraints in the supply of building materials, prevailing condition in the building industry, inability of financial institutions to carry out thorough and rigorous analysis of projects and assess the technical ability of operators, lack of awareness among stakeholders, organizational constraints, lack of motivation for private sector investors due to poor secured recovery plan, non-adherence to planning standards, challenges of poverty and lack of proper monitoring among others. These challenges cut across all tiers of governance and need to be properly assessed and addressed in order to improve housing delivery through PPP. Muhammad and Johar (2018) in analyzing the challenges to implementation of PPP for housing delivery, identified the parameter for measuring the success of every PPP and obtained five (5) categories of success factor as follows;

Effective Procurement Process (EPP)

EPP1-EPP15- the success of every PPP begins with effective procurement such as EPP1-Transparent procurement process, EPP2-Competitive procurement process, EPP3-Good governance, EPP4-Well-organized and committed public agency and EPP5-Trust and openness between parties.

Favourable Investment Environment (FIE) which some scholars called enabling environment which includes FIE1 - Stable political system, FIE2 - Favourable economic system, FIE3 -Fair and efficient legal

framework, FIE4 - Availability of financial market, FIE5 - Supportive community.

Judicious Government Control (JGC) with the following breakdown JGC1 - Government guarantee, JGC2-Efficient approval process, JGC3 - Consistent monitoring, JGC4 - Action against errant developers.

Appropriate Risk Allocation (ARA) which includes ARA1-Equitable risk allocation in contractual agreement ARA2-Equitable risk allocation in operational agreement, ARA3 - Equitable risk allocation in loan agreement, ARA4-Equitable risk allocation in design/build contract agreement. The various success indicators were SPPP1-Value for money SPPP2-Quality of products and services, SPPP3-Efficiency, SPPP4-Financial returns to the private sector, SPPP5- Stakeholders' satisfaction. The above critical success measures agree with the work of Onyemaechi *et al.* (2015) on determining factors that affects the successful operation of PPP. Moghayedi, Awuzie, Omotayo, Le Jeune, Massyn, Ekpo, Braune and Byron (2021) stated that the challenges to the implementation of sustainable innovative and affordable housing is dependent on analyzing the critical success factor in PPP for housing delivery. These parameters are all encompassing to the implementation of PPP for housing delivery as the barriers to the success of every PPP arrangement is connected to the barriers to its implementation.

Methodology

The study on Evaluating the Major Barriers to the Implementation of Public Private Partnership for housing delivery in South-East Nigeria is based on addressing the housing delivery system with the view of identify the major barriers to the implementation of PPP for housing delivery in south-East. A survey design approach was adopted for this research and a structured

questionnaire and interview were used to sift information on the barriers to the implementation of PPP for housing delivery in the South-East. Information required on housing delivery system where collected from professionals connected with housing development in the six (6) states of the South-East through the real estate housing development companies under the Real Estate Developers Association of Nigeria (REDAN), Housing cooperation and ministry of lands. The statistics of the population is as follows: 1649 registered members of REDAN, 6 housing cooperation, 6 Ministry of Lands, 773 registered and practicing real estate developers, forming a total of 2,434 professionals in the field. The Housing Cooperation of various states have most of the information relating to PPP estates and non PPP estates and form a good data base for information required. Giving the time frame, a total of 344 populations were derived using Taro Yamn population sampling technique. Each of the Housing Cooperation and Ministry of Lands were interviewed and information on the barriers to the implementation of PPP for housing delivery was collected. Data collate was analyzed using IBM SPSS version 28 for windows. The inferential statistics for testing hypotheses include Factor analysis (Principal Component Analysis) and Chi square. Results were presented in tables and chart. The descriptive statistics employed include frequency, percentage, means and standard deviations.

Findings

Distribution of questionnaire

This section presents detail of the distribution and retrieval of questionnaire as well as the percentage of questionnaires retrieved from the respondent.

Table 2 shows that a total number of 344 copies of the questionnaire were distributed to the respondents based on a purposive

sampling. Out of the 344 copies of questionnaire distributed, 328 were completed and returned which corresponds to a response rate of 95.35%. The response rate was high because professional colleagues in different electronic group assisted the researcher in distributing and returning the questionnaire. The response rate of 95.35% is reasonably high and serves the purpose for the study. The rest of the questionnaire were either not properly completed or returned uncompleted. The ones not properly completed were disregarded because they were not usable.

Total Number of copies of Questionnaire administered	344	
Number of copies retrieved	328	95.35
Number not retrieved	16	4.65
TOTAL		100%

Factors affecting the implementation of PPP for housing delivery in South-East

This section is meant to identifying possible factors that can either promote or influence the operation of PPP in the South-East. The Table 3 listed 32 factors:

Table 2: Return rate of questionnaire distributed

Description	Frequency	Percent
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Table 3: Factors affecting the implementation of PPP

S/n	Factors	Strongly disagree n (%)	Disagree n (%)	Indifferent n (%)	Agree n (%)	Strongly Agree n (%)	Mean ± SD
1	Government instability and non-commitment to PPP projects.	20 (6.1)	61 (18.6)	0 (0.0)	145 (44.2)	102 (31.1)	3.76 ± 1.24
2	Political influence on project selection and procurement process.	0 (0.0)	0 (0.0)	0 (0.0)	226 (68.9)	102 (31.1)	4.31 ± 0.46
3	Transparency and anti-corruption.	20 (6.1)	62 (18.9)	20 (6.1)	123 (37.5)	103 (31.4)	3.69 ± 1.26
4	Regulatory environment and political will to facilitate private sector involvement	0 (0.0)	81 (24.7)	20 (6.1)	206 (62.8)	21 (6.4)	3.51 ± 0.94
5	Lack of proper governance and inter-sectoral coordination.	20 (6.1)	0 (0.0)	42 (12.8)	204 (62.2)	62 (18.9)	3.88 ± 0.92
6	Political interference/disruption in change of government/ Insincerity/corruption	0 (0.0)	21 (6.4)	0 (0.0)	145 (44.2)	162 (49.4)	4.37 ± 0.79
7	Poor Funding and weak supervisory/regulatory practices.	0 (0.0)	20 (6.1)	21 (6.4)	185 (56.4)	102 (31.1)	4.13 ± 0.78
8	Availability of project financing and access to capital market.	21 (6.4)	21 (6.4)	60 (18.3)	205 (62.5)	21 (6.4)	3.56 ± 1.45
9	Exchange rate fluctuations and currency risk in Cost of	41 (12.5)	40 (12.2)	63 (19.2)	42 (12.8)	142 (43.3)	3.31 ± 1.04

	construction/labour/material						
10	Poor/slow return on investment.	20 (6.1)	62 (18.9)	61 (18.6)	165 (50.3)	20 (6.1)	3.37 ± 0.92
11	Economic incentive for private sector participation.	0 (0.0)	61 (18.6)	124 (37.8)	103 (31.4)	40 (12.2)	3.43 ± 0.99
12	Public perception & acceptance of PPP projects.	0 (0.0)	82 (25.0)	63 (19.2)	143 (43.6)	40 (12.2)	3.69 ± 0.92
13	Nonpayment of compensation.	0 (0.0)	41 (12.5)	83 (25.3)	142 (43.3)	62 (18.9)	3.87 ± 0.99
14	Community engagement & potential resistance to project implementation.	0 (0.0)	62 (18.9)	0 (0.0)	186 (56.7)	80 (24.4)	3.38 ± 1.16
15	Social impact assessment & community benefits.	20 (6.1)	81 (24.7)	21 (6.4)	165 (50.3)	41 (12.5)	3.93 ± 0.66
16	Labour market conditions & workforce availability.	0 (0.0)	21 (6.4)	21 (6.4)	246 (75.0)	40 (12.2)	3.74 ± 0.83
17	Regulatory Framework and Legal structure of PPP for housing delivery.	0 (0.0)	41 (12.5)	42 (12.8)	204 (62.2)	41 (12.5)	3.56 ± 0.79
18	Contractual agreements and dispute resolution mechanisms.	0 (0.0)	41 (12.5)	83 (25.3)	183 (55.8)	21 (6.4)	3.87 ± 0.93
19	Compliance with environmental and building laws.	0 (0.0)	41 (12.5)	41 (12.5)	165 (50.3)	81 (24.7)	3.75 ± 0.96
20	Integration of innovative technologies into PPP.	20 (6.1)	0 (0.0)	83 (25.3)	165 (50.3)	60 (18.3)	3.75 ± 0.96
21	Cyber security and data protection consideration.	0 (0.0)	0 (0.0)	145 (44.2)	123 (37.5)	60 (18.3)	3.74 ± 0.75
22	High Cost of construction/labour/material	0 (0.0)	41 (12.5)	0 (0.0)	205 (62.5)	82 (25.0)	4.00 ± 0.87
23	Technology readiness for the proposed PPP project.	0 (0.0)	61 (18.6)	81 (24.7)	144 (43.9)	42 (12.8)	3.51 ± 0.94
24	Risk management technique.	0 (0.0)	40 (12.2)	103 (31.4)	164 (50.0)	21 (6.4)	3.51 ± 0.79
25	Bottleneck in land policy for housing delivery.	20 (6.1)	82 (25.0)	62 (18.9)	102 (31.1)	62 (18.9)	3.32 ± 1.21
26	Clearly defined role and responsibility of each party.	0 (0.0)	42 (12.8)	82 (25.0)	104 (31.7)	100 (30.5)	3.79 ± 1.01
27	Local cultural norms and values affecting project designs and implementation.	0 (0.0)	42 (12.8)	105 (32.0)	141 (43.0)	40 (12.2)	3.55 ± 0.87

28	Nonpayment of adequate compensation.	0 (0.0)	20 (6.1)	83 (25.3)	123 (37.5)	102 (31.1)	3.94 ± 0.89
29	Cultural sensitivity in communication and project supervision/management.	0 (0.0)	62 (18.9)	21 (6.4)	184 (56.1)	61 (18.6)	3.74 ± 0.97
30	Stakeholder engagement and understanding of local custom.	20 (6.1)	81 (24.7)	83 (25.3)	103 (31.4)	41 (12.5)	3.19 ± 1.13
31	Transparency to build trust amongst stakeholders.	0 (0.0)	40 (12.2)	20 (6.1)	207 (63.1)	61 (18.6)	3.88 ± 0.85
32	Non recognition of local hierarchy and cultural heritage.	0 (0.0)	21 (6.4)	104 (31.7)	122 (37.2)	81 (24.7)	3.80 ± 0.89

Table 3 shows that the respondents agree that Government instability and non-commitment to PPP projects is a factor affecting the implementation of PPP for housing delivery in South-East. This is indicated by mean response value of 3.76 greater than the criterion mean of 3 and a low standard deviation of 1.24 which indicates low variability of responses. Other factors that affects the implementation of PPP for housing delivery in South-East includes Political influence on project selection and procurement process (4.31), Transparency and anti-corruption (3.69), Regulatory environment and political will to facilitate private sector involvement (3.51), Lack of proper governance and inter-sectoral coordination (3.88), Political interference/disruption in change of government/insincerity /corruption (4.37), Poor Funding and weak supervisory/regulatory practices (4.31), Availability of project financing and access to capital market (3.56), Exchange rate fluctuations and currency risk in Cost of construction/labour/material (3.31), Poor/slow return on investment (3.37), Economic incentive for private sector participation (3.43), Public perception & acceptance of PPP projects (3.69), Nonpayment of compensation (3.87), Community engagement & potential

resistance to project implementation (3.38), Social impact assessment & community benefits (3.98), and Labour market conditions & workforce availability (3.74). Other factors include Regulatory Framework and Legal structure of PPP for housing delivery (3.56), Contractual agreements and dispute resolution mechanisms (3.87), Compliance with environmental and building laws (3.75), Integration of innovative technologies into PPP (3.75), Cyber security and data protection consideration (3.74), High Cost of construction/labour/material (4.00), Technology readiness for the proposed PPP project (3.51), Risk management technique (3.51), Bottleneck in land policy for housing delivery (3.32), Clearly defined role and responsibility of each party (3.79), Local cultural norms and values affecting project designs and implementation (3.55), Nonpayment of adequate compensation (3.94), Cultural sensitivity in communication and project supervision/management (3.74), Stakeholder engagement and understanding of local custom (3.19), Transparency to build trust amongst stakeholders (3.88), and Non recognition of local hierarchy and cultural heritage (3.80).

Hypothesis Testing

H01. There is no discernable pattern of factors affecting the implementation of PPP for housing delivery in South East.

Table 4: KMO test of sampling adequacy and Bartlett’s test of sphericity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	5840.207
	Df	190
	Sig.	<.001

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy is a statistic that indicates the proportion of variance in the variables that might be caused by underlying factors. A value of 0.820 generally indicates that a factor analysis is appropriate for the data. Bartlett's test of sphericity indicates that the correlation matrix is not an identity matrix ($P < 0.001$), which means that the variables are related and therefore suitable for structure detection.

Table 5: Communalities

S/N	Description of Factors	Initial	Extraction
1	Government instability and non-commitment to PPP projects.	1.000	.901
2	Political influence on project selection and procurement process.	1.000	.970
3	Transparency and anti-corruption	1.000	.936
4	Regulatory environment and political will to facilitate private sector involvement	1.000	.949
5	Lack of proper governance and inter-sectoral coordination.	1.000	.948
6	Political interference/disruption in change of government/Insincerity/corruption	1.000	.971
7	Poor Funding and weak supervisory/regulatory practices.	1.000	.813
8	Availability of project financing and access to capital market.	1.000	.900
9	Exchange rate fluctuations and currency risk in Cost of Construction/labour/material.	1.000	.843
10	Poor/slow return on investment.	1.000	.869
11	Economic incentive for private sector participation.	1.000	.942
12	Public perception & acceptance of PPP projects.	1.000	.929
13	Nonpayment of compensation.	1.000	.954
14	Community engagement & potential resistance to project implementation.	1.000	.941
15	Social impact assessment & community benefits.	1.000	.939
16	Labour market conditions & workforce availability.	1.000	.942
17	Regulatory Framework and Legal structure of PPP for housing delivery.	1.000	.954
18	Contractual agreements and dispute resolution mechanisms.	1.000	.990
19	Compliance with environmental and building laws.	1.000	.892
29	Integration of innovative technologies into PPP.	1.000	.891
21	Cyber security and data protection consideration.	1.000	.913
22	High Cost of Construction/labour/material.	1.000	.928
23	Technology readiness for the proposed PPP project.	1.000	.882
24	Risk management technique.	1.000	.907
25	Bottleneck in land policy for housing delivery.	1.000	.831
26	Clearly defined role and responsibility of each party.	1.000	.831
27	Local cultural norms and values affecting project designs and implementation.	1.000	.876
28	Nonpayment of adequate compensation.	1.000	.748
29	Cultural sensitivity in communication and project supervision/management.	1.000	.919
30	Stakeholders’ engagement and understanding of local custom.	1.000	.929
31	Transparency to build trust amongst stakeholders.	1.000	.786
32	None recognition of local hierarchy and cultural heritage.	1.000	.925

Extraction Method: Principal Component Analysis.

Table 5 indicates the amount of variance in each variable that is accounted for. Initial communalities are estimates of the variance in each variable accounted for by all components or factors. For principal

components extraction, this is always equal to 1.0 for correlation analyses. Extraction communalities are estimates of the variance in each variable accounted for by the components. The communalities in this table

are high (greater than 0.5), which indicates that the extracted components represent the variables well.

Table 6: Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.683	27.135	27.135	8.683	27.135	27.135	5.602	17.506	17.506
2	5.271	16.471	43.606	5.271	16.471	43.606	4.446	13.893	31.398
3	4.339	13.559	57.166	4.339	13.559	57.166	4.094	12.793	44.191
4	3.128	9.775	66.941	3.128	9.775	66.941	3.722	11.632	55.823
5	2.710	8.469	75.410	2.710	8.469	75.410	3.545	11.078	66.901
6	1.867	5.834	81.244	1.867	5.834	81.244	2.830	8.845	75.746
7	1.642	5.133	86.377	1.642	5.133	86.377	2.779	8.685	84.430
8	1.311	4.097	90.474	1.311	4.097	90.474	1.934	6.044	90.474
9	.999	3.122	93.596						
10	.691	2.160	95.757						
11	.556	1.737	97.494						
12	.430	1.342	98.836						
13	.204	.638	99.475						
14	.168	.525	100.000						
15	6.331E-15	1.978E-14	100.000						
16	4.458E-15	1.393E-14	100.000						
17	3.507E-15	1.096E-14	100.000						
18	2.658E-15	8.305E-15	100.000						
19	2.510E-15	7.843E-15	100.000						
20	2.038E-15	6.368E-15	100.000						
21	1.427E-15	4.460E-15	100.000						
22	5.789E-16	1.809E-15	100.000						
23	5.626E-17	1.758E-16	100.000						
24	-9.730E-16	-3.041E-15	100.000						
25	-1.285E-15	-4.017E-15	100.000						
26	-1.790E-15	-5.593E-15	100.000						
27	-2.501E-15	-7.815E-15	100.000						
28	-3.565E-15	-1.114E-14	100.000						
29	-3.776E-15	-1.180E-14	100.000						
30	-4.435E-15	-1.386E-14	100.000						
31	-5.676E-15	-1.774E-14	100.000						
32	-9.457E-15	-2.955E-14	100.000						

Extraction Method: Principal Component Analysis.

In Table 6 the Total Column gives the original variables accounted for by each eigenvalue, or amount of variance in the component. The % of Variance column gives

the ratio, expressed as a percentage of the variance accounted for by each component to the total variance in all of the variables. So, factor 1 explains 27% of total variance, factor 2 explains 16%, factor 3 explains 14%, factor 4 explains 10%, factor 5 explains 8%, factor 6 explains 6%, factor 7 explains 5% while factor 8 explains 4%. The first factor explains larger amount of variance whereas the rest of the factors explain smaller amounts of variance. According to Kaiser’s criterion, retain all factors with eigenvalues above 1 and 0.6 average communality. Therefore, all factors with eigenvalues greater than 1 were extracted. The eigenvalues associated with these factors are again displayed and the percentage of variance explained in the columns labeled Extraction Sums of Squared Loadings. The cumulative percentage for the 8 derived components is 90%. They explain 90% of the variability in the original 32 variables, so we can considerably reduce the complexity of the data set by using these components, with only a 10% loss of information. In the final part of the table (labeled Rotation Sums of Squared Loadings), the eigenvalues of the factors after rotation are displayed. Rotation has the effect of optimizing the factor structure; however,

some changes occurred after the rotation. The rotation maintains the cumulative percentage of variation explained by the extracted components, but that variation is now spread more evenly over the components. The changes in the individual totals suggest that the rotated component matrix will be easier to interpret than the unrotated matrix.

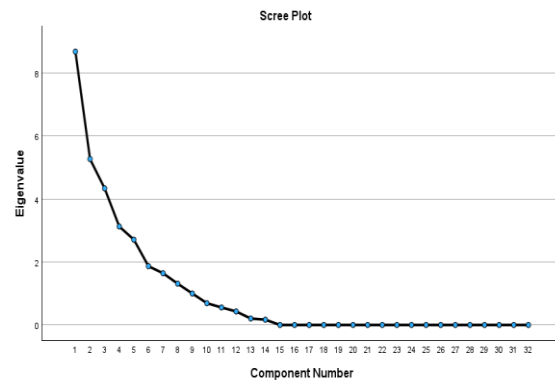


Figure 1: Scree plot showing the extracted 8 components.

The scree plot (Figure 1) helps to determine the optimal number of components. The eigenvalue of each component in the initial solution is plotted. Generally, the first eight components on the steep slope were extracted. The components on the shallow slope contribute little to the solution.

Table 7: Rotated Component Matrix indicating the extracted components and factor loadings

	Component							
	1	2	3	4	5	6	7	8
Regulatory Framework and Legal structure of PPP for housing delivery.	.945							
Contractual agreements and dispute resolution mechanisms.	.917							
Regulatory environment and political will to facilitate private sector involvement.	.838							
Stakeholder engagement and understanding of local custom.		.869						
Bottleneck in land policy for housing delivery.		.844						
Risk management technique.		.720						
Social impact assessment & community benefits.		.715						
Nonpayment of adequate compensation.			.922					
Nonpayment of compensation.			.900					
Transparency to build trust amongst stakeholders.			.718					
Compliance with environmental and building laws.			.710					
Clearly defined role and responsibility of each party.			.685					
Labour market conditions & workforce availability.				.878				
Economic incentive for private sector participation.				.657				
Public perception & acceptance of PPP projects.				.580				

Lack of proper governance and inter-sectoral coordination.				.772			
Community engagement & potential resistance to project implementation.				.759			
Poor/slow return on investment.				.566			
Local cultural norms and values affecting project designs and implementation.				.852			
Non recognition of local hierarchy and cultural heritage.				.725			
Cultural sensitivity in communication and project supervision/management.				.677			
Cyber security and data protection consideration.						.782	
Technology readiness for the proposed PPP project.						.704	
Integration of innovative technologies into PPP.						.671	
Exchange rate fluctuations and currency risk in Cost of Construction/labour/material.							.867
High Cost of Construction/labour/material.							.778
Poor Funding and weak supervisory/regulatory practices.							.717
Availability of project financing and access to capital market.							.708
Transparency and anti-corruption.							.707
Political influence on project selection and procurement process.							.938
Political interference/disruption in change of government.							.914
Government stability and commitment to PPP projects.							.583

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 15 iterations.

Finally, the rotated component matrix (also called the rotated factor matrix in factor analysis) which is a matrix of the factor loadings for each variable onto each factor shows factor loadings greater than 0.5 and sorted by order of size. The result reveals eight factors (components). The variables that load highly on factor 1 is regulatory, factor 2 is risk management, factor 3 is compliance, factor 4 is community engagement, factor 5 is cultural factor, factor 6 is technological factor, factor 7 is economic factor while factor 8 is political factor. The null hypothesis is hereby rejected and the alternative accepted. Therefore, there is a discernable pattern of factors affecting the implementation of PPP for housing delivery in South East.

Discussion of Findings

PPP is a proven sustainable tool for economic development as already highlighted in this paper but just like any other projects involving partnership, issues on

implementation will always arise. Most of the problems examined in this work are issues of disagreement along the line that results in delay in completion or abandonment as both parties find it difficult to agree with the initial Terms of Reference (ToR) or MoU. Some of the PPP Estates examined in Anambra State (Green Valley and Hillview Estate) were cases of insecurity and delay in settling some compensation arrangements which was caught-up with inflation and prices of items hiked to the point that the contractors that were meant to provide the necessary facilities for the housing project stopped work and went back for renegotiations. A further investigation to this case was made to discover that there were changes in the government that caused the delay from the government. This shows that most times, change in government leadership can constitute a barrier or delay in immediate implementation of a project. The non-commitment of government as cited by Yakubu *et al.* (2017) is a fact that affected the projects, otherwise a strong sanction if

provided in implementation document to defaulters would have adequately secured the project from this mess.

Looking at most of factors mentioned by many authors and in this paper, majority with high ranking values are pointing towards the government. In this paper, the 32 factors listed that was coincided to 8 factors have regulatory and political factors ranking topmost. The reason can be traced to the fact that most of the PPP projects are more of government initiative, (being that they were overburdened with housing provision from the inception for her citizenry). In the work of Keke, *et al.* (2021) where the constraint is on affordable funding mechanism, the government was faulted for not adequately enshrining adequate financing mechanism into the implementation as they virtually use some of their control to frustrate the funding policy for the private sector. The 31% PPP and 69% Non-PPP is also a proven fact that PPP implementation and utilization is low and have received little attention in the South-East. This agrees with the research work of Ugonabo (2023), Yakubu *et al.* (2017), Owoatmu *et al.* (2021), Mohammad *et al.* (2018) and Moghayedi, *et al.* (2021), where projects were delayed or abandoned as a result of government not committed to fulfilling their obligations and not following the ToR/MoU of a particular project. Once any of the party defaults in their obligations, the project suffers delay or complete abandonment even when the other assumes the position of the defaulted party. The initial purpose will be defeated as reported in Yakubu *et al.* (2017) where the private sector assumed the responsibility of the government and the project could not serve the affordability structure because the private sector factored in the cost of bearing the infrastructure that would have been the responsibility of the government. Abdullahi and Aziz, (2011) and Ihome, *et al.* (2015) on the political will prevailing as a barrier to the implementations of PPP is part of corruption

racking most sectors. Every project is expected to pass the feasibility and viability test to be implemented but most times, political will overrides because of corruption and insincerity. The implementation becomes challenging as such housing project should not have been initiated ab initio.

Ugonabo (2023) drew his case study from Niger State and ranked Political factors at a mean of 4.28 amongst the other factor and mean of 4.31 was discovered in this work. Conclusion is drawn that political factors contribute extensively in the implementation of PPP across the region in Nigeria. The regulatory and political factors were the factors that loaded very high which aligned to implementation barrier. Onyemaechi, *et al.* (2015) identified 18 number success factors to the implementation of PPP which in other way round are the barriers to PPP implementation. In his work in that region, land was a barrier to the success of PPP. Land which is a government responsibility (to make land available for its citizenry by the virtue of Land Use Act) was a major barrier to the implementation of PPP as private developers cannot easily have access to land. This is also one of the reasons why most barriers to the implementation of PPP are more of public than private. In some cases, where the government acquires land that is on dispute, there is always serious insecurity that causes delay and additional cost.

Conclusion

This study focused on the major barriers to the implementation of PPP for housing project in South-East. The result reveals eight factors (components). The variables that load highly on factor 1 is regulatory, factor 2 is risk management, factor 3 is compliance, factor 4 is community engagement, factor 5 is cultural factor, factor 6 is technological factor, factor 7 is economic factor while factor 8 is political factor. Therefore, in the conception of any PPP project in South-East, focus should be on the MoU and it should be

made flexible to meet with any change that may occur as a result of inflation. Covid-19 is an unforeseen circumstance that affected most projects as the delay it brought was unpredicted and inflation on prices was evidenced. Also where land acquired by government is on dispute before the acquisition, care must be taken as to determine the use for which such land should be put to so as to capture social interest than economic interest. Finally, it is therefore necessary that the MoU and ToR for PPP should capture and grant each party to PPP, adequately informed on their responsibility and the consequences following defaulting.

Reference

- Abraham A. T., Adeboye, A. and Aderonmu, P. A., (2014). Housing Finance: The Role of the Private Sector in Public-Private Partnership in Housing Delivery for the Low-Income in Nigeria. *International Journal of Architecture and Urban Development* 4(3).
- African Development Bank (2023). Sustainable Urban Development Action Plan (SUDAP), Centre for affordable housing finance in Africa.
- Almusaed, A., and Almssad, A. (2022). Introductory chapter: Sustainable housing introduction to the Thematic area. (IntechOpen.doi: 10.5772/intechopen.101968).
- Aribigbola, A. (2008). Housing policy formulation in developing countries: Evidences of programme implementation from Akure, Ondo State Nigeria. *Journal of Human Ecology*, 23(2),125–134.
- Aruma, E.O., and Hanachor, M. E. (2017). Abraham Maslow's Hierarchy of needs and assessment of needs in community development. *An International Journal of Development and Economic Sustainability*, 5(7) 4-7.
- Berrone, P.; Ricart, J.E.; Duch, A.I.; Bernardo, V.; Salvador, J.; Piedra Peña, J. and Rodríguez Planas, M. (2019) EASIER: An evaluation model for public–private partnerships contributing to the sustainable development goals. *Sustainability*, 11, 2339. <https://doi.org/10.3390/su11082339>.
- Bjarstig, T., and Sandstrom, C. (2017). Public-private partnerships in a Swedish rural context - A policy tool for the authorities to achieve sustainable rural development? *Journal of Rural Studies*, 49, 58–68. <https://doi.org/10.1016/j.jrurstud.2016.11.00>.
- Buckley, R. M., and Kalarickal, J. (2005). *Housing policy in developing countries: Conjectures and Refutations*. Oxford University Press on behalf of the International Bank for Reconstruction and Development.
- Heng, Z., Wang, H., Xiong, W., Zhu, D and Cheng L (2021) Public–private partnership as a driver of sustainable development: toward a conceptual framework of sustainability-oriented PPP Environment, Development and Sustainability 23:1043–1063 <https://doi.org/10.1007/s10668-019-00576-1>.
- Dahiru, A. and Muhammad, R. S. (2015) Critical success factors of public-private-partnership projects in Nigeria. *ATBU Journal of Environmental Technology*, 8(2).
- Daramola, S. A., Alagbe, O. A. Aduwo, B. E. and Ogiye, S. A. (2005, May) *Public-Private Partnership and housing delivery in Nigeria*. Conference Proceedings of Africa Union of Architects Congress Abuja, 26 – 44.

- Ibrahim A.D., Price, A.D.F. and Dainty, A.R.J. (2006) Analysis and allocation of risks in public private partnerships in infrastructure projects in Nigeria. *Journal of Financial Management of Property and Construction* DOI: 10.1108/13664380680001086.
- Ibem, E. and Azuh, D.E. (2011) Framework for evaluating the sustainability of public housing programmes in developing countries. *Journal of Sustainable Development and Environmental Protection*, 1, 24–39.
- Ibem, E.O and Aduwo, E.B. (2012). Public private partnership in Urban housing in Nigeria: Evidence from Ogun. *International journal of architecture and urban development*, 2(2) 5-14.
- Iheme, J. O., Effiong, J. B. and Ekung, S. B. (2015) Effects of government policy on housing delivery in Nigeria. *International Journals of Social and Humanistic Sciences*, 61, 87-98 ISSN 2300-2697.
- Jiboye, A. D. (2009). The challenges of sustainable housing and urban development in Nigeria. *Journal of Environmental Research and Policies*. 4 (3), 23-27.
- Keke, O. V.; Egolum C. C. and Emoh, F. I. (2021) Constraints to Affordable Private Sector Mortgage Finance for Urban Low Income Housing in Nigeria: An Appraisal *Tropical Built Environment Journal (TBEJ)* 8(1).
- Li, B., Akintoye, A., Edwards, P.J. and Hardcastle, C. (2005) The allocation of risk in PPP/PFI construction projects in the UK. *International Journal of Project Management*, 23, 25-35.
- Moghayedi, A., Awuzie B, Omotayo T, Le Jeune K, Massyn M, Ekpo C. O, Braune, M.; Byron, P. (2021). A critical success factor framework for implementing sustainable innovative and affordable housing: A Systematic Review and Bibliometric Analysis. *Buildings*,11(8), 317. <https://doi.org/10.3390/buildings11080317>.
- Muhammad, Z. and Johar, F. (2018). Coping with challenges of public-private partnership for housing delivery in Nigeria. *International Journal of Engineering and Technology* 7(2.29) 1097-1101.
- Oladokun, T. T, and Aluko, B.T. (2012). Public-Private Partnership in housing delivery in Lagos state Nigeria. *Proceedings of International Conference on Construction and Real Estate Management*, Kansas City, USA, 1st and 2nd edition, 246- 250.
- Ogunbayo B. A., Alagbe O., Ajao A. and Ogundipe K. E. (2016). Determining the individual significant contribution of public and private sector in housing delivery in Nigeria. *British Journal of Earth Sciences Research*, (4).
- Olumuyiwa, B. A. and Abraham A. T. (2011). Contribution and challenges of the private sector's participation in housing in Nigeria: case study of Akure, Ondo state. *Journal of Housing and The Built Environment*, (26)457–467. DOI 10.1007/S10901-011-9233-X.
- Owotemu, A., Daniel, C. and Abubakar, H. (2022). Evaluating the management of public private partnerships for the provision of affordable housing in Nigeria. *Journal of Service Science and Management*, 15, 392-415. doi: [10.4236/jssm.2022.154024](https://doi.org/10.4236/jssm.2022.154024).
- Shelter Afrique (2014). Financing affordable housing for Africa. Alternative building technologies and construction methods. *International Green Structure*.

- Taiwo A. and Adeboye, A. (2013). Sustainable housing supply in Nigeria through the use of indigenous and composite building materials. *Journal of International Institute for Science, Technology and Education*, 3(1).
- Tomlinson, F. (2005). *Idealistic and pragmatic versions of the discourse of partnerships: Organizational studies*, 26(8) 1169–1188.
- Ugonabo, C.U (2023). Evaluating the implementation of public-private partnership (PPP) for housing provision in Nigeria: a case study of Niger State. *Global Journal of Arts, Humanities and Social Sciences*, 11(8), 12-21.
- Ugonabo C.U., Egolum C. C., Sado R.O. (2023) Nigerian Land Policy: issues, challenges and the way forward, *Global Journal of Politics and Law Research*, 11(1), 57-77.
- UN-HABITAT. (2006). *National Trend in Housing – production practices*. volume 4: Nigeria. UN-Habitat information services [online]. [Accessed 10 March 2013] Available online at <<http://www.Unhabitat.org>>.
- UN-Habitat. (2007). Milestones in the evolution of human settlements policies, 1976-2006. State of the world cities. Report 2006/2007. The MDGs and urban sustainability. 30 years of shaping the Habitat Agenda. U.K. Earth.
- United Nations (UN). (2016). *Sustainable Development Goals (SDGs)*. 2016 Available from: <http://bit.ly/1IqICxS>.
- Waziri, A. G and Roosli R., (2013). Housing Policies and Programmes in Nigeria: A Review of the concept and implementation Business. *Management Dynamics* 3(2), 60-68.
- Yakubu, N. S., Natalia, A. A. and Mallo M. D. (2017). An Assessment of Public Private Partnerships for Housing Projects in Bauchi State, North Eastern Nigeria. *International Journal of Regional Development*, 4(1).