

# Exploring Factors Affecting Implementation of Public Private Partnership Housing Projects in Bauchi State, Nigeria

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**Abstract.** Public Private Partnership (PPP) Housing scheme in Nigeria is intended to complement government effort toward increasing housing stock and providing affordable housing in the country. However, Bauchi state government adopted the construction of 5,000 phases PPP Housing. But 6 years after the commencement of the scheme, only a few numbers of housing units were completed and commissioned. Therefore, it becomes imperative to carry out research on the impact level of those factors affecting the implementation of the scheme. The aim of the study is to investigate impact level of factors affecting the implementation of PPP housing projects in Bauchi state with a view to find out possible ways that will improve the implementation of the scheme. The descriptive and explorative research design was adopted for this study. 54 structured Questionnaires were administered to construction professional's staff under private housing developers and relevant government agencies in Bauchi state. 42 valid Questionnaires were retrieved and analysed with SPSS software. The result of the quantitative data analysis shows that creation of favourable investment environment and government support have very high Impact on the implementation of Bauchi PPP housing projects. Therefore, this study recommends that government and other stakeholders should give more attention to the creation of favourable investment environment, support in policy formulation and managerial strategies in the future for improving the implementation of PPP housing projects.

**Keywords:** impact; factors; public; private; partnership; housing.

## INTRODUCTION

Public private partnership (PPP) is an arrangement between the public and private sectors with clear agreement on shared objectives for the delivery of public infrastructure and/or public services by the private sector that would otherwise have being provided through traditional public sector procurement [12]. The adoption of public private partnership (PPP) in housing provision in Nigeria is intended to increase urban housing stock and address housing affordability and accessibility [8]. It is an attempt to transfer some of the responsibilities of public sector housing schemes to private organizations through PPP. But records show that Bauchi State Government commence the construction of 5,000 unit of housing through PPP arrangement in 2008 [3]. However, after six years of the adoption

of PPP Housing project in Bauchi State, only 228 housing units were completed and commissioned for habitation in 2015 [3]. This is an indication that there are some factors that hindered the successful implementation of the Bauchi PPP housing scheme. Therefore, this requires thorough investigation in order to find out the magnitude or severity of their effects in Bauchi PPP housing projects. Authors [7] also observed that there are little achievements recorded in most of the Nigerian cities by public private partnership housing scheme to address the shortfall in the provision of affordable housing in the country. PPP housing implementation challenges were recorded in various states in Nigeria [4, 7, 8, 14]. But there was no non-study that investigate impact level of factors affecting the implementation of PPP housing projects which left a gap to be filled.

## Factors Affecting the Implementation of PPP Projects

Authors [11] found that the success or failure of a PPP project is dependent on a number of factors that can be classified into four groups: The competence of the government, the selection of an appropriate concessionaire, appropriate risk allocation between the public and private sectors and sound financial package.

Government plays an important role in the development and management of a PPP project. The inappropriate involvement of government to manage PPP projects may lead to project failure. Authors [11] further summarised the roles of government in PPP project into five subfactors: Create favourable investment environment, Establish adequate legal/regulatory framework, To select a suitable concessionaire, Establish a coordinating and supportive authority and Be actively involved in the project life-cycle phases.

A concessionaire is principle participant in a PPP project, its responsibilities include the financing, design, construction, operation, and maintenance of the infrastructure facilities and the transferring of the facilities to the client in operational condition at the end of the concession period [11]. Concessionaire selection was subdivided into the procurement process, tender evaluation method and evaluation criteria.

A risk is defined as any factor, event or influence that threatens the successful completion of a project interim of cost, time and quality [12]. Researchers [11] found that PPP project is characterised by high level of risks due to the long concession period, and the diversity of participants involved in the partnership and risks associated with PPP projects can be categorized into political risks, financial risks, construction risks, operation and maintenance risks, market and revenue risks and legal risks.

Construction is capital-intensive activities which require a sound financial plan for its successful implementation. Authors [11] concluded that a sound financial plan for a PPP should have an appropriate mix of equity and debt, a financing strategy that is based on the considerations of project risks, project conditions, and financing sources and some government supports such as the minimum guaranteed revenue, the flexibility in tariff structure, the financial support, and force majeure protection may be required to make a PPP project financially viable.

## METHODOLOGY

Research design refers to the framework for the collection and analysis of data and the choice of the research design reflect the decision about priority being given to a range of dimensions of the research process [10]. The descriptive and explorative research design was adopted for this study. This research collected data from primary source using Questionnaires. While secondary data was collected from previous related literature and Bauchi State Ministry of Lands and Housing records on Bauchi PPP housing schemes to support and complement the findings of the primary data. A 5-point Likert scale was employed in the questions to indicate the degree of agreement by the respondents on factors affecting the implementation of PPP housing project. "1" represented strongly disagreed, "2" represented disagreed, "3" represented Not decided, "4" represented agreed and "5" represented strongly agree for section B. 54 structured Questionnaires were administered to construction professionals staff under private housing developers and relevant government agencies in Bauchi state. 42 valid Questionnaires were retrieved and analysed with SPSS software.

### Impact level of Factors

Authors [5] assert that ordinal scale is used to determine the level of impact based on the mean rating (MR) computation. The scale was divided into five categories; from 1–1.8 = very low impact, 1.8–2.6 = low impact, 2.6–3.40 = small impact, 3.40–4.20 = high impact and 4.20–5.00 = very high impact. The scale was used to determine the impact level of factors affecting the implementation of Bauchi PPP housing projects base on the mean obtained in the analysis. Therefore any factor that has a mean rating (MR) within these ranges will be categories appropriately as shown below:

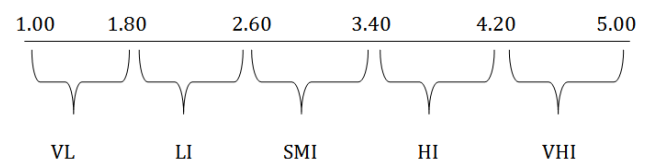


Figure 1 – Evaluation Scale [5]

## RESULTS AND DISCUSSION

The Table 1 present the result of the professional background of the respondents.

Table 1 – Respondents professional background

Staff	Frequency	Percent	Valid Percent	Cumulative Percent
Architects	10	23.8	23.8	23.8
Builder	8	19.0	19.0	42.9
Estate Valuer	9	21.4	21.4	64.3
Quantity surveyor	15	35.7	35.7	100.0
Total	42	100.0	100.0	

It shows that there are 10 Architect (23.8 %), 8 Builder (19.0 %) , 9 Estate valour (21.4 %) and 15 Quantity Surveyor (35.7 %) respectively.

The Table 2 shows Academic Qualification of the respondents.

Table 2 – Academic qualification of the respondents

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Phd	2	4.8	4.8	4.8
M. Sc. /M. Tech.	8	19.0	19.0	23.8
B. Sc. /B. Tech. / HND	27	64.3	64.3	88.1
OND	3	7.1	7.1	95.2
Others	2	4.8	4.8	100.0
Total	42	100.0	100.0	

B. Sc. / B. Tech. / HND has the highest frequency of 27 (64.3 %) then follows by M. Sc. / M. Tech. with the frequency of 8 (19 %), PhD 2 (4.8 %) and other 2 (4.8 %) respectively.

The Table 3 shows the frequency and percentages of the various roles of the respondents in PPP projects.

Table 3 – Respondents' role in PPP projects

Role	Frequency	Percent	Valid Percent	Cumulative Percent
Developer	16	38.1	38.1	38.1
Government	20	47.6	47.6	85.7
Consultant	6	14.3	14.3	100.0
Total	42	100.0	100.0	

It revealed that Governments Agency (public) have the highest frequency of 20 (47.6 %). Developers have the frequency of 16 (38.1 %). The respondents from consultants have the frequency of 6 (14.3 %)

The Table 4 shows the overall ranking of factors affecting the implementation of Bauchi PPP housing project. The table 4 revealed that create favourable investment environment and govern-

ment support have a very high impact on the implementation of Bauchi PPP housing project with the mean of 4.29 and 4.24 and therefore, ranked number 1 and 2 respectively.

These factors are very crucial and should be given appropriate consideration in the implementation of Bauchi PPP housing project.

Table 4 – Impact Level of factors affecting the implementation of Bauchi PPP housing projects

Factors	Sum	Mean	S. D	Ranking	Impact Level
Create favourable investment environment	180	4.29	.554	1	Very High
Government supports	178	4.24	1.078	2	Very High
Establish adequate legal/regulatory framework	176	4.19	.505	3	High
Project financing sources	175	4.17	.794	4	High
Project financial viability	174	4.14	1.117	5	High

Factors	Sum	Mean	S. D	Ranking	Impact Level
Project financing strategies	173	4.12	.772	6	High
Tender evaluation method	169	4.02	.563	7	High
To select a suitable concessionaire	168	4.00	.733	8	High
Establish a coordinating & supportive authority	167	3.98	1.000	9	High
Being actively involved in the project life-cycle	167	3.98	.749	10	High
Political risks	161	3.83	1.342	11	High
Evaluation criteria	155	3.69	.975	12	High
Procurement process	154	3.67	1.004	13	High
Financial risks	136	3.24	1.511	14	Small
Legal risks	133	3.17	1.228	15	Small
Market and revenue risks	131	3.12	1.292	16	Small
Construction risks	126	3.00	1.414	17	Small
Operation and maintenance risks	124	2.95	1.229	18	Small
Environmental/land risks	121	2.88	1.234	19	Small

## CONCLUSION

As mentioned earlier, the purpose of this research is to investigate factors affecting the implementation of Bauchi PPP housing projects. To achieve the stated aim of the study the following objective was set. To Identify and assess the impact level of the factors affecting the implementation of the projects. Therefore, the conclusion will be made base on these objectives. The objectives were achieved by information collected from PPP housing record from Bauchi State Ministry of Lands and Housing in 2014, an extensive review of literature and questionnaire survey. The result of the assessment of the nineteen factors that were identified shows that Creation of favourable investment environment and Government Support have a very high impact and consider as most powerful factors affecting the implementation of Bauchi PPP housing projects. Public private partnership housing projects in Nigeria is relatively new. As such, mistakes can easily be

made due to inexperience. The little experience acquired during the execution of few PPP projects should be used to enhance the implementation of the scheme in the future. In addition, the recommendations of various research conducted on problems and most importantly the prospects of PPP housing projects should be utilised judiciously to facilitate the successful implementation of the scheme in the future. The government should create a favourable investment environment that will be supported by stable legal and economic framework for advance and sustainable implementation of PPP housing projects. Government support in the form of project specific assistance, loan guarantee, guarantee minimum revenue and tax reduction should be given to the private developers. This will increase the financial viability of the project and assured private developers the likely revenue that may accrue from PPP projects if undertaken in any concession project.

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