EVALUATION OF ADEQUACY OF PUBLIC PRIVATE PARTNERSHIP DEVELOPMENT STRATEGY ADOPTED BY NIGER STATE HOUSING CORPORATION

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ABSTRACT

This study is titled "Evaluation of the Adequacy of Public Private Partnership Development Strategy adopted by Niger State Housing Corporation" (NSHC) from 2007 to 2015, it has as its objectives: identification of the PPP model adopted and the number of housing units planned and developed, assessment of the adequacy, liveability and affordability of the housing being developed through the strategy and evaluation of the adequacy of the strategy and the performance of NSHC under the strategy. Questionnaire and interview which were both open and close ended were used to collect data from management and staffs of NSHC, Niger State Public Procurement Board (NPPB) and PPP office and the residents of M.I. Wushishi housing estate and Talba housing estate that were being occupied while data on factors responsible for non-occupation of Aliyu Makama and Bako Kotangora housing estates was collected from NSHC. Data collected was analyzed with the use of descriptive statistics and the hypothesis was tested with the use of Pearson Product Moment Correlation and regression. The study revealed that Build-Operate-Transfer (BOT) model of PPP was adopted as the housing development strategy, 500 housing units each were developed for both M.I. Wushishi and Talba housing estates which were allocated and occupied while Aliyu Makama housing estate, Bida and Bako Kontagora housing estate, Kontagora are yet to be completed 12years after commencement, a total of 219,000 housing units was planned to be developed and 2000 units was developed which represents 0.91%. The assessment of adequacy and liveability of the housing units being developed shows that the 2bedroom flats in M.I. Wushishi housing estate recorded an adequacy level of 18.9% while Talba housing estate recorded 73.8%, the 3bedroom recorded 79.6% and 78.9%respectively, the estates were adjudged to be liveable by the residents. Affordability index premised on the monthly repayment revealed that for M.I. Wushishi housing estate, 2bedroom flats is only affordable to civil servants on grade level 7 and above with monthly expenditure of 25% while the 3bedroom is only affordable to civil servants from grade levels 13 and above while at Talba housing estate, 2bedroom is affordable to civil servant on grade level 9 and above with monthly expenditure of 30% while the 3bedroom is affordable only affordable to grade level 14 step 9, thus the housing is not affordable to low-income earners. The study further revealed that NSHC functions spans from conception of building design to allocation and post occupancy management and with an overall mean score of 2.10 the performance of NSHC in the development of M.I. Wushishi and Talba housing estates was rated good and with a mean score of 3.0 the performance of NSHC in the development of Aliyu Makama and Bako Kotangora housing estates was rated fair. The study recommended that the repayment period be extended to 25years as this will reduce monthly repayments and it will make 2bedroom at M.I. Wushishi housing estate affordable to GL1 and 3bedrooms affordable to GL7, at Talba housing estate, 2bedrooms will become affordable to GL7, and 3bedrooms affordable to GL9 and that a comprehensive legal and institutional framework should be put in place to improve the adequacy of the PPP strategy.

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CHAPTER ONE

INTRODUCTION

1.2   Background to the study

Housing has been described to be more than a mere shelter, four walls with a roof thereon and a mere protection from vagaries of weather elements to include services, amenities and facilities that makes life comfortable. It is a singular factor that plays a fundamental role in the promotion of good health, work efficiency, productivity, high socio-economic standard, general welfare as well as the development of individuals, societies and nations (Aluko, 2002; Jinadu 2007 & Nubi 2008). In recognition of the role and importance of housing in socio-economic development of societies and nations, the UN-HABITAT (1966) opined that the right to adequate and affordable housing is as a fundamental human right and employed states that are parties to the covenant to recognize same for all their citizens and in agreement with this position, section 43 of the Nigerian constitution recognized the right of all Nigerians to own and acquire immovable property in any part of the country.

The Federal Government has been making several efforts through policy formulations and evolving different strategies at solving and improving the provision of adequate and affordable housing for Nigerian citizens, especially the low income. In 1980, a National Housing Policy was lunched with the goal of providing affordable housing to accommodate Nigerian households in a liveable environment, in 1991 another housing policy was lunched with the goal of ensuring accessibility to decent housing accommodation for all Nigerians at affordable cost by the year 2000 which aims at solving the lapses of the previous policy and with the obvious failure of this second policy, another housing policy was launched in 2006. The NHP (1980) identified eight (8) strategies to be engaged towards solving housing problems; NHP 1991 identified eighteen (18) strategies while the NHP 2006 identified

twenty-two (22) strategies totaling forty-eight (48) strategies that were identified and documented (Jinadu, 2007). However, in-spite of these policies and strategies that were put in place towards solving housing problems, the rate of housing deficits in Nigeria in the form of overcrowding, homelessness, poor quality housing has been on the increase for all categories (Abimbola & Adebayo, 2017). This situation calls for the need to develop alternative strategies of public housing delivery that will achieve the dual results of greatly increasing the supply of affordable housing especially for the low-income earners and drastically reduce the financial burden of government.

The need for increase in supply of decent, adequate and affordable housing is a global concern and this gave birth to the development of public private partnership (PPP) as a strategy for implementing urban housing and infrastructure which started in the United Kingdom in 1960s known then as Private Finance Initiative (PFI), Sarafadeen & Akuakanwa, 2015. Globally, over 40 nations including United Kingdom, United States of America, Australia, Ireland, Norway, Canada, Spain, France, Japan, Singapore, Finland, Malaysia and South Africa are engaging PPP in implementing urban housing and infrastructure and the value of PPP projects rose from $79B with 241 projects to $350B in 2015 with a total 0f 1,046 projects (Yahaya *et al.,* 2020).

In Nigeria, the federal government introduced public private partnership as a strategy for public housing delivery towards increasing the housing stock through the National housing policy of 2006 (Aluko, 2009) which is a collaboration between government and the organized private sector with detailed responsibilities, obligations and benefits of each party to the agreement and thereafter, states in the country began to take after the steps of the federal government by engaging PPP as a strategy for the provision of urban housing and infrastructure. From 1990 to 2009, over 51 projects were implemented through PPP (Vetiva, 2011) while 66 projects were prepared for implementation between 2013-2014(ICRC, 2012),

the values of executed PPP projects also rose from \$22M in 1997 to \$3.1B in 2009(Yahaya *et. al.,* 2020). To ensure proper implementation, the federal government established the Infrastructure Concession Regulatory Commission in 2005 and approved a comprehensive nationwide PPP policy in 2009 which provides the roles of ICRC, other sectors as well that of Ministries, Departments and Agencies (MDAs) -Wahab, 2000: ICRC,2012.

In Niger State, PPP as strategy for housing delivery was introduced by the administration of Governor Ibrahim Babangida Aliyu in 2007 which was used for the development of General M.I. Wushishi and Talba housing estates in Minna, Aliyu Makama housing estate, Bida and Bako Kontagora housing estate in Kontagora. In view of this, the study shall undertake an evaluation of the adequacy of PPP development strategy adopted by Niger State Housing Corporation.

1.3   Statement of Research Problem

The implementation of PPP for public housing development in Niger state has recorded various challenges ranging from defaults in contractual obligations by both public and private sector, non-affordability of the housing being produced from the PPP housing development strategy and conflicts of roles among PPP agencies amongst others (Richard *et al.,* 2015; Jiya *et al*., 2018; Mamood & Anifowose, 2018), although, the housing units are adjudged to be fairly adequate in terms of liveability (Mohit & Sule, 2015).

In the previous studies, the analysis of affordability of the housing units was based on beneficiaries responses to the questionnaire on whether the housing units are affordable to them or not rather than engaging the Niger state salary structure which would have allowed specific recommendations, furthermore, the performance of Niger State Housing Corporation (NSHC) was not analyzed by a quantitative method and the severity of the factors that affected the inability of the allottees not to be able to take possession of unoccupied housing units was either not carried out or not carried out using quantitative method, a gap that this

study intends to fill. This study is undertaken to evaluate the adequacy of the PPP development strategy adopted by Niger State Housing Corporation (NSHC) with a view of identifying the type of PPP being adopted, the adequacy, liveability and affordability of the housing being developed and evaluate the roles of NSHC under the PPP development strategy

1.3   Aim

The aim of the study is to carry out an evaluation of adequacy of PPP development strategy adopted by Niger State Housing Corporation from 2007-2015, with the view of improving the quality and quantity of housing being developed and the performance of NSHC in the implementation of PPP for housing provision in Niger state.

1.4   Objectives of the Study

To achieve the aim, the following objectives were adopted to:

1. Identify the type of PPP development strategy adopted, the units planned and developed and location.
2. Assess the liveability and adequacy of M.I. Wushishi and Talba housing estates to the occupiers.
3. Evaluate the affordability of the housing units to the occupiers.
4. Identify the roles of NSHC, evaluate its performance under the strategy and determine the adequacy of PPP strategy in housing provision in Niger state.

1.5   Research Questions

The following research questions have been put in place by the study to provide a guide towards the achievement of the objectives.

1. What type of PPP development strategy was adopted by NSHC between 2007- 2015 and what was the quantity planned, developed and location?

2. What is the perception of the occupiers on the liveability and adequacy of the housing units being developed?

3. How affordable are the housing units being developed to the occupiers?

4. What are the roles of NSHC, what was the level of its performance under the strategy and how adequate is the housing strategy being adopted in the provision of housing in Niger state?

1.6   Hypothesis

H_o: There is no statistically significant relationship between income characteristics of the

residents and their housing affordability.

H_1: There is statistically significant relationship between income characteristics of the

residents and their housing affordability.

1.7   Scope of the Study

The study is focused on the PPP development strategy adopted by NSHC from 2007 to 2015, the liveability, adequacy and affordability of the housing units and the performance of NSHC under the strategy and four housing estates are herein being considered and these are: Talba Housing Estate Minna, M.I. Wushishi Housing Estate Minna, Aliyu Makama Housing Estate Bida and Bako Kotangora Housing Estate, Kotangora.

1.8   Significance of the Study

This project shall assist Niger State government in developing affordable housing, it will help to improve the level of performance of NSHC in the continuous implementation of PPP as housing development strategy and it will help to improve the adequacy of PPP housing development strategy being adopted through increase in the quantity, liveability and adequacy of the housing units to be developed and also, it will assist Niger state government in ensuring a more transparent procurement process in the selection of developer and award of contract so as to reduce housing development challenges and avoid development abandonment as it is currently being experienced with respect to Aliyu Makama housing estate, Bida and Bako Kontagora housing estate, Kontagora. It will also assist other states of the federation who are implementing PPP for housing provision in developing affordable housing and their housing development agencies to improve on the level of their performance and finally, the study shall also contribute to the body of knowledge in the continuous search for solutions to housing problems especially for the low-income group that constitutes the majority.

1.9   Limitation

This study is evaluation of adequacy of PPP development strategy adopted by Niger State Housing Corporation in the provision of housing from 2007 to 2015 and it focuses on M.I. Wushishi housing estate, Minna, Talba housing estate, Minna, Aliyu Makama housing estate, Bida and Bako Kontagora housing estate, Kontagora. Data was collected from Niger State Housing Corporation (NSHC), Niger State Public Procurement Board (NSPPB) and PPP office, the developers of these housing estates could not be assessed either for administration of questionnaire or interview, however, the NSHC site engineers and estate officers designated to the estates who worked directly with the developers were interviewed to obtain necessary information.

1.10   Description of the Study Area

1.10.1   Niger state

Niger state falls in the north central geo-political zone and it stands between longitudes 3^0 20'E and 7^0 40'E and longitudes 8^0 30N, it has a land area of 76, 469. 903 square kilometers which is 10% of the total land area of Nigeria and it is the state with the largest landmass. Niger state has a population of 3, 905, 249 (NPC, 2006) and it is bounded by Kaduna, Kogi, Nassarawa, Kwara, and Kebbi state as well as the federal capital territory (FCT) which creates an increasing demand on housing in Niger state.

Figure 1.1 is map of Niger state showing Chanchaga local government area which is the study area and other local government areas in the state.

Figure 1.1: Map of Niger State.

Source: Niger state ministry of lands and housing (2020)

1.10.2 Minna capital of Niger State

Minna is the capital of Niger state and it locates on longitude 6^0 33E and latitude 9^0 37N with a land area of 881 square kilometers; it is also the headquarters of Chanchaga Local Government and it is bounded by Shiroro, Wushishi, Bosso and Paiko local government areas. Minna has a total population of approximately 207, 429 with an estimate growth rate of 2.3% per annum (NPC, 2006) and the name Minna was derived from two Gbagyi language words "Min" and "Na" which means spray and fire, Minna, therefore literally translated means spread fire. The present Minna city metamorphoses through four stages: the period of rail line constructions which brought settlement of other tribes, the period of alkali (judges), the movement of the Gwaris' from the mountain to the valley and the making of Minna the capital of Niger state on 13th February 1976. Minna is blessed with fertile lands which supports agricultural production such as yam, cassava, sorghum and mineral resources such as gold (NSMI&C,2004).

Figure 1.2 is a map of Minna, the capital of Niger state where Niger housing corporation locates, the map shows the network of major roads, structures, rail line and drainage streams.
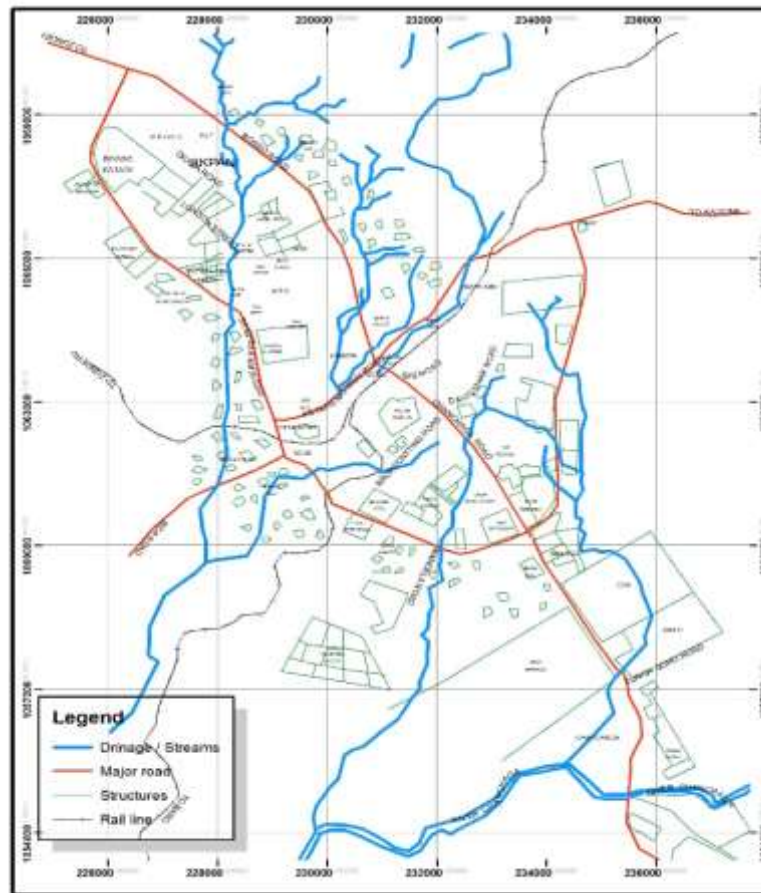
Figure 1.2: Map of Minna.

Source: Niger state ministry of lands and housing (2020)

1.10.3 Historical background of Niger State Housing Corporation

Niger State Housing Corporation (NSHC) was established by Edict No , 1979 with the aim of improving housing both in quantity and quality in order to enhance the living standard of the citizens of Niger state, the housing agency is made up of five major departments which are Administration, Works, Planning, Finance and Supply and Estate which consists of sub-units such as architecture, quantity surveying, land surveying, Internal audit, Public relations

and Estate management.

Following the establishment of NSHC, it conceived the idea of low-cost housing and the Tudun-wada low-cost housing estate was birthed, it consists of 260 units of 3bedroom and 60 units of intermediate housing which were completed between 1980 and 1981 and allocated to civil servants and non-civil servants, in the same year of its establishment, the agency acquired the 27 units of 4bedroom and 3bedroom flats at Zarmai neighbourhood and allocated them to civil servants. Other housing projects initiated, constructed and allocated includes, Bosso low-cost housing estate, Minna, Dutsen-kura low-cost housing, Minna, low-cost housing estate at Suleja, Cooperative Housing Home Ownership Scheme in Minna and Bida, serviced plots were also undertaken in Minna, Bida, Kontagora, Suleja and all the local government headquarters, building materials loan was granted to individuals wishing to develop their houses and undertook in direct housing construction to willing participants. For housing development, the agency adopted contractor financing and direct labour and it recorded a 100% success rate.

Apart from residential housing development and allocation to the public, NSHC also undertook consultancy services federal, state and quasi-government establishments and in this regard, the agency undertook works such as design and supervision of presidential lodge, Minna, design and supervision of Bida Agricultural Development project, design and construction of commissioners quarters and residential lodges, design and construction of Progress Court, Minna, design and construction of two commercial complexes along Bosso Road, redevelopment of Gwari market amongst others which were executed satisfactorily, it also operated a mortgage bank, Niger State Building Society (NSBS) which was later closed as a result of the inability recapitalize as directed by the Central Bank of Nigeria.

During the administration of Abdulkadir Kure(1999 -2007), housing development was at a

very low ebb as the administration did not have housing development as a priority, however, with the launching of vision 3:2020 by the administration of Governor Ibrahim Babangida in 2007 with public-private partnership as the development strategy, public housing development was revived and NSHC has been actively involved in the development of M.I housing estate, Talba housing estate both in Minna, Aliyu Makama housing estate, Bida, Bako Kontagora Housing estate, Kotangora and other housing projects since 2007 till date (Mohammed *et al.,* 2013)

NSHC has been in the business of housing development to the citizens of Niger state for over four decades as indicated above engaging different housing development strategies such as contractor financing, direct labour, cooperative housing and public-private partnership.

CHAPTER TWO

LITERATURE REVIEW

2.1   Conceptual Review

In this section, the study reviews literatures relating to concepts of PPP, liveability, sustainable liveability, habitability, adequacy, affordability, housing and public housing towards promoting the understanding of the study.

2.1.1 Concept of Public Private Partnership (PPP)

PPP has been defined as the pooling together of resources which includes financial, human, technical, land and intangibles such as information, political support, skills and expertise from public and private sources to achieve a commonly agreed goal(Fizbein & Lowden, 1999), a set of cooperative activities between the public and private sector (Agbola & Olatubara, 2003), a collaborative efforts among public, private and third sector organizations who has mutually consented to cooperate together based on trust engaging the principle of division of labour, comparative advantage and a sharing of risks and benefits(Brinkerhoff & Brinkerhoff, 2004, UN-HABITAT, 2006b), it has also been defined as a range of relationship between the public and private sector who has agreed to cooperate together for the provision of specified facilities, services, infrastructure or housing (Kumar & Prasad, 2004), a novel concept of executing public projects through a partnership arrangement with the private sector especially in the area of infrastructure (Aluko, 2009), a finance model which is entirely driven by collaboration between the public, private and sometimes non-profit sectors and it is generally represents a more dynamic, long term agreement between various parties in which each party contributes and shares some level of risk (UN-HABITAT, 2011), it is also viewed as the partnership between the public and private sector for the purpose of designing,

planning, financing, constructing and/or operating projects which are traditionally considered as public responsibilities (Sarafadeen & Akuakanwa, 2015).

This study views PPP as the pooling together of heterogeneous investors each with distinct capabilities, comparative advantages, skills and resources for the purpose of addressing socio-economic and developmental challenges of the society.

2.1.2   Concept of Liveability

The concept of liveability relates to the quality of the environment, the liveliness of an environment and the ability of an environment to support quality living and wellbeing of people living in it (Mohit & Sule, 2015), it is a term employed to describe the relationship between an organism, person or a community and the environment and the relationship (liveability) can be construed as perceived liveability which is being measured in research by asking dwellers or occupants how they appreciate their environment, apparent liveability which can be measured by the number of happy years of life and presumed liveability which is the degree to which the living environment meets the presumed conditions for liveability. Environment is being viewed as the prevailing external conditions which positively or negatively affects the living conditions of man against which he may sometimes not be able to exercise control, it is the sum total of all conditions that surrounds man at any time on the surface of the earth (Omuta, 1988).

Studies shows a positive correlation between the quality of an environment and human productivity, efficiency, anti-social behavior, life span, life expectancy, overall quality of life, security of lives and properties (Omuta,1988; Olutuah & Taiwo, 2015; Mohit & Sule, 2015).

2.1.3 Concept of Sustainable Liveability

Sustainable development is the development that takes care of the needs and welfare of the present generation without compromising the ability of the future generation to meet their own needs (Justice, 2019). Following this definition, sustainable livability is being viewed as having quality environment that is able to meet the needs of the present generation and sustaining that quality to meet the needs of future generations and these needs consist of health and security, material prosperity, social relationships, control and contact with the natural environment (Beatriz *et al.,* 2019). This concept therefore places obligations on the dwellers and users of the environment that to ensure that the in the exploration of the environmental resources, necessary efforts are being made to ensure a continuous quality state of the environment both for themselves and future generations.

2.1.4 Concept of Habitability

The concept of habitability explains the level of satisfaction derived by the tenants or residence from his abode. It reveals that housing is more than a shelter. The component of housing is: people, shelter, institutional arrangement and environment (Omole, 2000). These four components interact to produce the level of satisfaction, which eventually determines the level of housing needs in a given place. However, habitability varies in some circumstances and as such the habitability of a housing at a particular point in time can be defined meaningfully in the relative rather than in the absolute sense (Jiboye, 2012). This model was developed to assess people's satisfaction with housing. The habitability of housing is influenced not only by the engineering elements, but also social, behavioural, cultural and p other elements on the entire societal and environmental system.

The concept reveals that housing is more than a shelter; it refers to types of tenant-dwelling environmental interaction system. Habitability as defined is portrayed as a human concept which involves four (4) interacting sub-system as indicated in the Figure 2.1
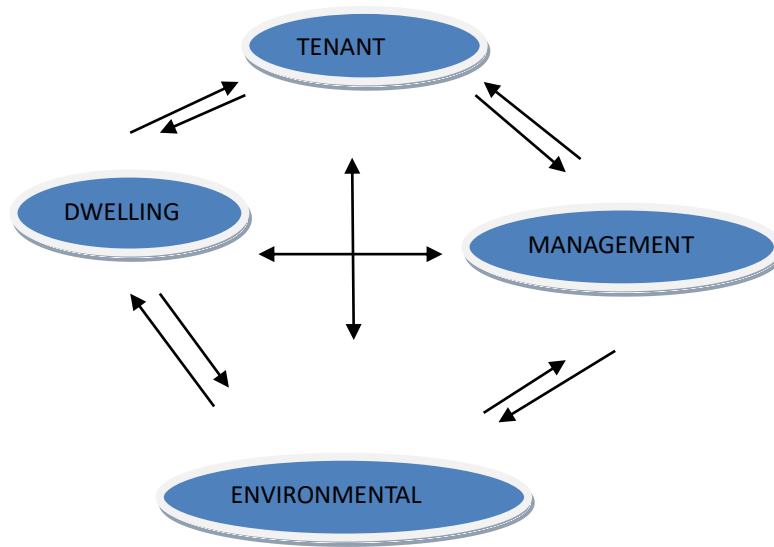
Fig 2.1: Concept of habitability

Source: Adapted from Omole, 2000

2.1.5   Concept of adequacy

UN-HABITAT (1996) defined Adequate housing as "Adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting; heating and ventilation; adequate basic infrastructure such as water supply, sanitation and waste management facilities; suitable environmental and health related factors; and adequate and accessible location with regards to work and basic facilities; all of which should be at affordable cost". In view of differences in cultural, social, economic and environmental factors, what constitutes adequate housing may vary from country to country (UNHABITAT, 2006) and thus each country will define the yardstick by which adequate housing may be measured or defined.

Housing adequacy is been considered as or measured with indices such as structural stability, interior decoration, availability of amenities and services, neighborhood conditions and habitability of housing and occupancy rate, it is a housing that is able to meet the physiological, psychological, health and security needs of the occupant and it provides a basic platform towards other necessities such as education and good health and it contributes towards the definition of fundamental human right (Onibokun, 1985; Ibem & Amole, 2011). Therefore, Public Housing development should transcend the provision of decent and affordable housing to include accessibility to employment and education, improvement in physical and mental health, wealth creation, social integration and civic engagement all of which goes to make life comfortable to the occupants (Bryne & Diamond, 2007).

The attributes of adequate housing are being categorized into two broad categories i.e. the non-physical attributes such as tenure security, affordability, accessibility and cultural adequacy while the physical attributes consist of housing units, housing services and infrastructures and neighborhood environment (Xiaolong *et al.,* 2019) and studies indicates existence of inadequacies in public housing development in Nigeria and also in international communities (Adedeji, 2006; Adejumo, 2008; Nubi, 2008; Jiboye, 2009; Ibem, 2011; Ibem & Azah, 2013; Xiaolong *et al.,* 2019.

2.1.6   Concept of Affordability

Affordable housing is that housing which recognizes the inability of households whose income cannot afford them a decent housing in the open market without financial and /or other forms of support being made to them. It is a housing that is designed to assist the low-income households in obtaining and paying for a decent housing without experiencing undue hardship and it is also being referred to as public, social or low-cost housing (Akeju, 2007; Ankeli *et al*., 2017).

Affordable housing from the view point of government means affordability in terms of ability to pay for a decent housing by the middle- or low-income groups and it should not exceed more than 30% of total income (Ankeli *et al.,* 2017), the authours explained the operational difficulty in Nigeria of the fixation of 30% of the total income as the affordability where the National Minimum wage is N18,000 per month which translate to N216,000 per year and the 30% is N64, 800 in comparison with an average 2 bedroom flat in Nigerian urban centers which is between N150,000 – N200,000 and this translates to 69% - 93%. This scenario thereby places a heavy burden on the government to evolve strategies that will lead to the development of housing that will be affordable by the low-income group that constitutes the majority of the Nigerian population. This further implies production of housing at a pre-determined rate which agrees with Omole (2007) which defines affordability as the ability of households to pay for housing at a predetermined rent.

Housing affordability in Nigeria is tending towards political slogan and mere academic exercise as the gap between the affordability range and housing cost is very wide and it kept on increasing resulting from the increasing rate of urbanization, inflation, dwindling government resources and this has also made the production of housing through the mass housing schemes to produce rents far beyond affordability (Olatubara & Fatoye, 2007). To achieve affordability government would need to evolve policies and action plans that will tackle the multi-faceted factors such as accessibility to land, security of tenure, high cost of land, land titling, high cost of building materials by addressing inflation and foreign exchange encourage the production and local building materials, engage in pro-active physical planning (Ankeli *et al.,* 2017). However, in view of the government seemingly inability to tackle rising inflation and consequently increases in the cost of goods and services as well as decrease in the purchasing power of the naira which has led to a depression in the salaries of

an average Nigerian worker, there is the challenge of providing housing and affordability of same by workers (Onyike, 2007).

Affordability is being largely influenced by the proportion of the household income budgeted for housing and the cost of the housing that the household prefers and there is increase in affordability when the former is higher than the latter and vice versa (Nelson, 2002) and he expressed above in an equation as stated below

$$\text{Affordability index (AI)} = \frac{\text{Household budget for housing}}{\text{housing cost}} \qquad \text{Equation 1}$$

$$\text{Or} \qquad \frac{\text{Household affordable budget for housing}}{\text{Monthky Repayment Neccessary for a given Housing Consumption}} \qquad \text{Equation 2}$$

The need for the government to increase affordability is urgent in the face of continuous decrease in the value of workers' income. To this end, Chatterjee (1981) proposes a twofold policy approach; the first one is with respect to reducing prices of housing while the second is that increasing housing finance. In agreement with the twofold policy approach, Kolawole (2009) alluded that there will be improvement in affordability and increased in housing participation by the low-income group if there is extension of repayment period, reduction of housing cost and reduction of interest rate on housing.

2.1.7   Concept of Housing

Housing is beyond mere shelter, four walls with a roof meant to protect from the vagaries of weather elements and human and animal intrusion to include amenities, services and facilities that are provided within and outside the shelter such as water, electricity, gas, heater as well as communal facilities such as police post, market, shopping malls all of which goes to make life comfortable (Jinadu, 2007), it is a fundamental need of man that satisfy his desire for security, privacy and protection from the negative vagaries of the environment, an

enhancement of human health and a boost to socio-economic wellbeing of individuals and society (Nubi, 2008), it is been defined as a functional shelter within the neighborhood that is both appropriate and with a sustainable maintenance attribute of a built environment for individual and families to live in and carry out their day to day activities (National Housing Policy, 2006), however, what constitute a functional shelter and an appropriate environment was not explicitly defined by the policy.

The United Nations Committee on Economic, Social and Cultural Rights (UNCESCR) stated that housing is beyond a mere shelter, a provision of walls with roof thereon and should also not be viewed as a commodity. The committee went further to state that for housing to correspond to international law, certain minimal elements must be guaranteed at all times and these are services, facilities, materials and infrastructure including accessibility to safe drinking water and sanitation and same should be made available. Other attributes stipulated by the committee are:

1. It should be located far from polluted sites or sources of pollution but it should be near child-care centers and other social facilities. It should be habitable affording the occupant's protection from heat, cold, damp, rain, wind and disease vectors.
2. It should be affordable to the poorest groups through strategies such as provision of subsidies and protection of the group through unreasonable rent levels and increases. Protection and security of tenure ensuring a protection from forced eviction.
3. There should be accessibility for disadvantaged groups such as the elderly children, the physical disabled, the terminally ill as well as victims of natural disasters.

United Nations Commission for Human settlements (UN-Habitat, 2002) viewed housing as affordable shelter for all groups in all type of settlements which conforms with the basic requirements of affordability, security, structural stability and infrastructural support with

convenient access to employment and community services and facilities. Numerous Literatures abounds on the definition and concept of housing with some more comprehensive than others but there is a consensus among housing scholars that housing transcends mere shelter and that it has enormous influence on health, living standard and conditions, status, efficiency, effectiveness and productivity.

2.1.8 Concept of Public Housing

Public housing has been described using different terms such as low-income housing, affordable housing, social housing, mass housing, and housing for the poor and the less privileged. Public housing has been defined as housing that is being provided and owned by the government which is either managed solely by the government or in partnership with the private sector. This is done with the aim of providing mass housing for the citizens as well as some key top government officials either on owner-occupier or on rental basis (Ibem and Amole, 2010), It is a housing that is carried out by government agencies and their collaborators with the aim of providing decent and affordable housing stock within a country, state or locality (Ibem *et al.,* 2011).

Public housing is a housing that is owned by the government but could sometimes be sub-contracted to private agencies, it is a housing that is been financed, constructed and allocated by the government usually for the poor while in some instances, loans and/credit receipt at low interest are provided to ensure affordability (Eni, 2015), it has also been described as a form of housing provision which depends on the use of public fund and for the benefits of the citizens especially the low income (Ibem, 2011) and it is a housing where the government undertake the entire development process including design, type, site acquisition, construction, and allocation which runs contrary to the operations of the open market.

The United Nations Economic Commission for Europe (UNECE, 2015) Construed public housing as social housing and examined the concept in some selected countries within the commission and on a general level, the commission construed public housing as social housing and defined social housing as the housing that is undertaken by the State and it's for the disadvantaged members of the society that are unable to compete in the open market for housing of an acceptable standard ,it is therefore supplied at prices below the general housing market operating through the forces of demand and supply and are distributed through administrative chain rather than market forces(UNECE, 2015)

Table 2.1 contained various terminologies used by some countries within UNECE to describe public housing

Table 2.1: Different terminologies are used by the countries within the region of the commission.

Country		Terminology used in English
1.	Canada	Social housing
3.	Australia	Common housing or not-for-pro housing
4.	Germany	Limited profit housing
5.	Finland	Holisms promotion
6.	France	Government subsidized housing
7.	Israel	Housing at moderate rent
8.	United States for America	Public housing
9.	United Kingdom	Public housing
10.	Spain	Social housing
11.	Sweden	Public protected housing
12.	Netherlands	Public utility housing
13.	Serbia	Social housing

Source: UNECE, 2015

The Table 2.1 indicates different terminologies employed for public housing in selected UNECE countries.

Table 2.2 provides concepts/definitions of public housing by UNECE countries and this provides the perceptions of the countries which forms the basis of their approaches and strategies to public housing.

Table 2.2: Concept/definitions of social /public housing in selected UNECE countries

Country	Concept/ Definition
Czech Republic	We have no definition of social housing. We have a definition of people who are not able to accommodate themselves in the free market as a target group for subsidized housing construction.
United States of America	Public housing was established to provide decent and sate rental housing for eligible low-income families, elderly and persons with disabilities. Public housing comes in all sizes and types from scattered single family houses to high rise apartments for elderly families.
Serbia	Social housing is defined in Article 2 of the social housing law as housing of an adequate standard which is provided with state support accordable with social housing strategy and strategy implementation programs for households that cannot afford an apartment under market a condition for social, economic or other reasons.
Austria	There is no official definition for social housing but there are different forms of housing provision beyond the market.
Finland	Social housing refers to state subsidized and rent regulated social homes.

Source: UNECE, 2015

It can be inferred that, not minding the terminology employed, whether public or social housing, it is a housing that is undertaken by the government or its agencies for low income or the vulnerable group of the society who cannot afford a decent, standard and adequate housing through the market.

2.2   Theoretical Review

The challenges of the provision of low-income housing is a global phenomenon and housing scholars has been making efforts at providing solutions which appears to be yielding little result in the face of increases in housing deficit and one of the reasons for this is a result of the fact most of the empirical studies aimed at providing solutions lacked explicit theoretical underpinning (Taruvinga & Mooya, 2016). It is therefore expedient to position a research or study within a theoretical framework which is the focus of this section.

Property development theories are being categorized into three broad categories and these are: Neoclassical, Neo-Marxist and Structuralism theories which is being considered as the most suitable theory for speculative low-income housing development where private developers can be adequately factored in (Taruvinga & Mooya, 2016), a category which this research falls into. Therefore, an overview of the first two theories shall be made, while a little more emphasis shall be made on the structuralism theories upon which this research is premised.

2.2.1   Neo-Classical Theory

This theory engages economic variables such as price determination, outputs and income distribution in markets through the interaction of the forces of demand and supply. The theory is premised on the assumption that consumers are rational and are well informed about the product and the market but are constrained only by income and thus is also referred to as

rational choice theory or demand-side theory, thus, the functions of producers in the market is often being ignored (Taruvinga & Mooya, 2016).

According to Dunning (2017), neo-classical economic models assumes that households can achieve, or approximate, utility maximization in decision making where decision includes remaining in their current premises. He further stated that, a state of optimal relationship is always being achieved at any time in point by dwellings between household preferences, housing characteristics, financial constraints and market prices and because the outputs are used to explain preferences, the search process is of little interest in the theory and that markets are assumed to be in equilibrium or moving towards it. However, he stated that developments in behavioural economics causes preferences to shift and thus make utility maximization as posited in neoclassical theory not to hold and that consumer sacrifice rather than maximize and therefore, optimal decision can longer be assumed. In view of this, choice of acceptable dwelling is made from array of opportunities because of limitation on their ability to maximize utility, which according to him, could be as a result of problem of acquiring information or market structure and it is being summarized as what is known as "bounded rationality".

On the applicability of this theory to speculative low-income housing development which entails the participation of private developers such as in PPP which is a strategy being engaged by Niger state government for housing delivery, Taruvinga & Mooya, 2016 noted it has shortcomings which does not make it suitable for use and these includes the non-consideration of the supply side, the idea that market can always correct itself and that it is without friction (Buitelaar, 2004; Van der kraben & Lambooy, 1993) and an underlining market condition which is conducive for perfect supply (Hearly & Barretti, 1990).

2.2.2 Neo-Marxist Theories

Marxism, in a general term is a theory that depicts a society with two categories of people, that is, the rich and the poor. It depicts struggles and conflicts between the capitalists who possess the means of production and considered to be exploitative and the working class who are considered as the poor masses and in relation to housing, the theory views developers and landlords as exploitative capitalist class with their goal which is primarily the protection and promotion of their capital investment which is economic in nature and this is at variance with the goal of the occupiers of the low-income housing which is welfare (Taruvinga & Mooya, 2016). In low-income housing research, some researchers alluded that the involvement of private developers in low-income housing will likely lead to the marginalization of the poor and more poor and low income earners will be becoming landlessness (Craig and Porter, 2006; Seisedos, 2009; Brednoord & Verkoren, 2010; Campbell, 2011; Mosha, 2013; Rolink, 2013) and thus the engagement of these theories will lead to advocacy for social justice as well as calls on government for intervention to ensure equitable wealth redistribution.

According to Mbiba and Huchzermeyer (2002), neo-Marxist theory denigrate landlords and developers for imposition of rents and manipulating same so as to ensure the highest and best use for their lands and this theoretical position would not only demobilize the efforts of the private sector developers serving or intending to serve the low income housing sector but it would not also allow for the understanding of their ideologies and strategies (Lea, 2005; Altmann, 2011; Abdul-Aziz & Kasim, 2011).

Public housing delivery intends amongst others to increase the supply of adequate, liveable and affordable housing to the low-income group who does not possess adequate economic power to acquire housing in the open market either for renting or purchase and the engagement of this theory which includes provision of subsidies is viewed as a means of

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wealth redistribution (Taruvinga & Mooya, 2016). However, the federal government of Nigeria has for some years being operating budget deficits, high debt servicing, fall in revenue generation and several fiscal measures are being put in place to address the economy which is being worsened by economic recession and this has led to the deregulation of several sectors of the economy including petroleum and construction/building industry leading to removal of subsidies and therefore, government would not be able to cope with the pressure of low income housing demand.

2.2.3 Structuralist Theories

Individual characteristics can be broadly categorized into demographic, biographic and behavioural characteristics and it consists of characteristics some of which an individual does not have control over such as age to include those that are product of unconstrained behavior wherein an individual act independently and make it his own decision (Guy *et al.,* 2015). Therefore, what structuralist seek to achieve is an understanding of the behavior and actions of an individual (referred to as agents) arising from and being shaped by underlying structure, how structure affects the actions of agents and how it is also being affected by the actions (referred to as agency) of the agents and these postulations provides a platform to explain why low income housing provision by speculative developers is where it is through the application of theory to empirical evidence to have the understanding of structure affects and is affected by agents (Taruvinga & Mooya, 2016).

In the application of this theory to housing development, five concepts are necessary for consideration and these are: Class, production, capital accumulation, power and conflict (Lawson, 2009).

2.2.3.1 Class

The application of this structural concept highlights the importance of identifying the targeted market and the appropriate housing delivery system that will be suitable and this implies that housing delivery systems will always differ as the targeted market differs (Gumbo, 2010), it also implies that the theory considering housing as being an heterogeneous product would not expect the demand and supply pattern to be exactly the same for different classes, thus, the outcome would be different structures of housing provision (Ball, 1998). This will enable the developer to interact with the market, carry out market segmentation and develop appropriate marketing mix that will be able to satisfy the market segment(class) and it will also aid the developer in identifying peculiar risks, this theory therefore allows a proper interrogation of both demand and supply side for each class as opposed to neoclassical theory which focuses mainly on the demand side.

2.2.3.2 Production and Capital Accumulation

Capital formation through savings which is mobilized through financial and credit institutions and the investment of such savings is very crucial for the production of low income housing (Lawson, 2009) and this indicates a macro economic environment which is where low income housing developers operate and because of the peculiar characteristics of low income housing which makes it unable to compete favorably with other products, capital investment becomes a challenge and constraint, this makes some researchers (Craig & Porter, 2006; Seisedos, 2009; Campbell, 2011; Rolink, 2013) to allude that low income housing development is not profitable for the private sector and that venturing into it will not generate any authentic economic and social development for the market.

However, notwithstanding the above, Furubotn and Ritcher, 2005) stated that instead of engaging the neoclassical perspective and assumption that profit can only be made by

charging excessive prices, researchers can engage structural perspectives of which can help to explore institutional concepts such as transaction cost minimization, methodological individualism and social capital and that these concepts can enable speculative developers to leverage on their strategies and thus evolve profitable delivery systems that will be suitable for low income housing development.

2.2.3.3 Power

In the housing market, participants possess various levels and degrees of knowledge, expertise, experiences, platforms, competences and powers as a result of locational advantage, political affiliation, economic empowerment and other forms of advantages which could give an edge over other participants. For low income housing developers to gain insight and understanding on how to successfully serve the low income housing market, he must be able to properly interrogate the identified structure which could be resources available to the developer, rules governing economic activities within the market and motivation or objectives of the market players (Healey & Barret, 1990) with the aforementioned power variants, thus, adoption of structural theories in low income housing research will aid in the identification of variables that will lead to achieving greater successes in the production process (Taruvinga & Mooya, 2016).

2.2.3.4 Conflict

Arising from the possession of different levels of power by the participants via-a-vis their objectives, the possibility of conflicts is unavoidable and this underscores the importance of structure i.e. rules governing activities within the market which will promote human interaction and cooperation amongst the agents and this has the potential not only in promoting and enhancing smooth and successful transactions but also in reducing the cost of transaction, the importance of the above mentioned structure is further highlighted as a result

of information asymmetry amongst the participants which promotes the concept of "bounded rationality" and without structure to address cases of contract failures, there shall be increases in the costs of transactions (Arnott, 1987; Ball, 1998; Buitelaar, 2004; Lawson, 2009).

Two models of housing development are being briefly considered by this research and these are Healy's Structure-Agency theory (Hearly & Barett, 1990) and Ball's Structures of Housing Provision (Ball, 1998). In Ball's model, distinctions between structure and agency were not considered but rather focuses of identifying and establishing structures of housing provision which are networks of relationships of all players involved in housing provision thereby ignoring what is needed in order to promote the understanding of private sector involvement in low income housing production. This model appears to be what has been widely engaged in Nigeria in the use of PPP as housing strategy which could be as a result of lack or inadequate research on agents and agency aspect of the model and also, such research requires constant reviews because of dynamics of the market while Healy's model recognizes the uniqueness of different property developers and provided a structured way that will enhance the understanding of individual actors that are involved in the production process.

This research is an evaluation of adequacy of PPP development strategy adopted by NSHC which is the agency saddled with the responsibility of housing provision for the public. With the adaptation of PPP as strategy for housing provision by Niger State through the organization, the engagement of structuralist theory and Healy's Structure-Agency housing development model is considered to be suitable by this study for proper implementation of PPP and this will lead to increase in the delivery of low-income housing in Niger state, Nigeria and developing countries.

2.4   Review of Past Housing Policies and Programs

From the pre-colonial era and post-independence to date, Nigeria had engaged several housing programs, development plans and housing policies in attempt at solving or meeting the housing needs in Nigeria. A policy contains action plans, aim, or statement of intent made which provides guidelines to activities to be undertaken in a particular field of endeavor, for example housing (Agbola, 1998). Thus, a policy is a comprehensive document which contains inter-alia government's statement of intent on a subject such as Health, Education, Energy, Population, Housing etc. which is meant to guide activities, goals and objectives and the strategies as well as institutional firework, finance, human and materials resources that are required. Housing policy is therefore formulated by the government with the aim of meeting the citizens housing needs through a set of identified strategies which provides institutional, legal and regulatory frameworks (Abimbola & Adebayo, 2017). Housing policy contains housing programs to be executed, housing design, quantity, quality, target-groups, resources required and this provides a basis for government actions and evaluation (Sanusi, 1997).

2.4.1   The Pre-independence Period (1928-1960)

The communal system of housing development was employed in the pre-1928 period where members of the community supplies their labour and expertise to build and the developer or home owner supplies the building materials and meals for the workers during the period of development, a practice which still exists in some rural communities till date (Funmilayo & Adetokunbo, 2013).

The outbreak of the Bubonic plague in 1928 in Lagos, heralded a formal intervention of government in the housing sector by the defunct government of Lagos colony which led to the establishment of the Lagos Executive Development Board (LEDB) which focused mainly

on housing provision of civil servants. In the eve of the preparation for independence, there were construction of housing units in Surulere sequel to slum clearance and this recorded the first attempt at urban renewal in Nigeria (NHP, 1991; Fumilayo & Adetokumbo, 2013).

This period witnessed the establishment of Nigeria Building Society (NBS), a mortgage bank to provide housing loan to Civil Servants and the private sector, establishment of regional housing corporations in the Eastern, Western and Northern regions by the regional governments as well as urban redevelopment programs.

2.4.2   Post-independence (1960 – 1985)

This period marks the birth of the Rolling Plans and three rolling plans/National Development Plans were put in place and these were for the periods 1962-1968, 1970 – 1975 and 1976 – 1985 (Funmilayo & Adetokunbo, 2013). In the period spanning 1960-1975 which consist of the first two development plans, the housing sector was designated as a social sector, a non-profit making and non-income generation thereby leading to an insignificant allocation to the sector, leading to discouragement in the private sector which supplies over 80% of housing. Furthermore, building loans were poorly organized and managed (Funmilayo & Adetokunbo, 2013).

The worsening housing situation which manifests in increasing housing shortage and house rents, over-crowding, slum development, squatter settlement etc. drew the attention of government as per the magnitude of the housing problem and this led to the action plans taken for the 1976 – 1985. The strategies employed here was the granting of loans through the transformation of Nigerian Building Society (NBS) to Federal Mortgage Bank of Nigeria (FMBN) which serves as lending institution for house loans to Nigerians, promulgation of Decree No. 54, 1979 known as Employees Housing Schemes (Special provisions) which mandated all employers with employees up to fifty (50) to establish and maintain housing to

which governments are to assist with land, mandatory contribution of 5% -6% by commercial banks of their total deposits for housing through the Central bank and insurance companies to commit 25% of their life funds to real estate (Funmilayo & Adetokunbo, 2013).

2.4.3 Overview of Nigerian National Housing Policies

This section undertakes a review of Nigerian national housing policies which were put in place at various times to aid in addressing the housing situation in the country.

2.4.3.1 National Housing Policy, 1991

A National Housing Policy was formulated in the year 1991 with the goal of ensuring accessibility to decent and affordable housing by all Nigerians at affordable cost by the year 2000 AD and this policy thrust was premised on the United Nations (UN) advocacy calls of housing provision for all by the year 2000 AD (Abimbola & Adebayo, 2017).

The objectives of the policy are: -

    i. Encourage and promote active participant in housing delivery by all tiers of government.

    ii. Strengthen institutions within the system to render their services more responsive to demand.

    iii. Emphasize housing investment, which satisfy basic needs.

    iv. Encourage greater participation by the private sector in housing development

The policy provided eighteen strategies towards the fulfillment of the goal and these include:

    1. Establishment of appropriate institutional framework for effective planning in housing development.

    2. Revive existing laws and regulations such as Land Use Decree, Planning laws, etc., in

order to facilitate housing delivery.

3. Improve the finances and strengthen the executive capacity of local government to enable them contribute more efficiently in housing delivery.

4. Mobilize private sector participants in the provision of housing.

5. Provide site and services to facilitate home ownership and orderly urban and rural development.

6. Restructure the Federal Mortgage Bank of Nigeria to serve as an Apex housing finance institution.

7. Mobilize savings through the establishment of the National Housing Fund (NHF).

8. Encourage research into and promote the use of locally produced building materials as means of reducing housing costs.

9. Increase the quantity and improve the quality of manpower needed in the housing sector.

10. Ensure the preparation of National Housing Plan to spell out the details and strategies for achieving the objectives of the housing policy. (FGN, 1991 as cited in Jinadu, 2007).

Table 2.3 indicates housing needs of various housing types in both rural and urban centres, the Table indicates that tenement housing records the highest in both rural and urban centres with 65% and 74%

Table 2.3 Housing Need in Nigeria as at 1991

Housing Need	Urban %	Urban Units (Million)	Rural %	Rural Units (Million)	Total %	Total Units
Mansionette	2	67	0	12	1	79
Duplex	3	101	0		1	101
Detached Bungalow	10	337	20	2,289	17	2,627
Semi-detached bungalow	2	67	1	60	1	127
Flat	15	506	0	-	3	506
Tenement (Room)	65	2,194	77	9,200	74	11,393
Others	3	101	2	287	3	
Total	100	3,373	100	11,878	100	

Source: UN Habitat, 2001: - Report on National Housing Trend as cited in Makinde, 2014

Table 2.3 shows housing need in the year 1991 according to housing type in both urban and rural areas.

The estimated stock, number of households and the required housing outputs for the period 1991-2001 for urban and rural areas in Nigeria was captured by Table 2.4

Table 2.4 Estimated Housing Needs (1991-2001)

Estimated housing needs	Urban Areas	Rural Areas	Total
Housing stock 1991 (000 units)	3,373	11,384	15,221
Estimated no of households 2001 ('000)	7,289	15,295	3,916
Required output 1991 – 2001 ('000)	22,504	3,447	7,363
Required annual output, 1991 – 2001 ('0000)	391.6	344.7	736.3

Source: UN Habitat 2001 Report on National Housing Trend as cited in Makinde, 2014

The Table 2.4 indicates an annual housing need of 736,300 while the National Housing policy, 1991 provided for 720, 000 housing units to be built each year, this indicates an under estimation by the policy.

However, 10 years into the operation of the 1991 housing policy, housing deficits were still on the increase for all categories.

Categorization of housing need using income groups for the period 1990-2020 in Nigeria was captured by Table 2.5, using 10years gap, the Table reveals a progressive increase in housing needs for all the income groups

Table 2.5 Estimated Housing Needs in Nigeria between the Periods of 1990 – 2020

Income Group	1990	2000	2020
Low income	8,413,980	14,372,293	39,989,286
Medium Income	7,770,005	13,273,291	33,548,633
High Income	7,624,230	12,419,068	28,548,633
Total	23,808,215	40,064,652	102,111,019

Source: Agbola, 2004 as cited in Abimbola & Adebayo, 2017

2.4.3.2 National Housing Policy, 2006

In view of the inability of the previous housing programs and the 1991 housing policy to address the housing challenges, the 2006 housing policy was birthed following the work of a 15 Man Committee. Despite the laudable goals and objectives as well as the numerous housing development strategies contained in three housing policies, housing deficit has continued to be on the increase as indicated by Agbola, 2004. Researchers, scholars and authors has alluded different reasons for the ineffectiveness and inefficiencies of the public housing development/delivery strategies and the polices such as mismanagement of funds and politicization of housing program (Bana, 1991; Mustapha, 2002), poor implementation and lack of coordination of activities of public agencies involved in housing development (Ikejiofor, 1999; UN-HABITAT, 2006; Akinmoladun & Oluwoye, 2007; Ademiluyi & Raji, 2008), low capacity of the public agencies in delivering their housing mandate (Bana, 1991; Emerole, 2002), lack of consideration of end users socio-economic and cultural attributes and personal preferences (Awotona, 1987; Olatubara & Fatoye, 2007; Jiboye, 2009; Ibem & Amole, 2011) as well lack of proper monitoring and evaluation of housing policies and programs to death of good information infrastructure that would allow for feedback, performance appraisals and benchmarking (Federal Republic of Nigeria, 1991).

2.5   Public Private Partnership (PPP) in Housing Delivery

The increasing rate of housing deficits as a result of factors such as growth in population, urbanization, poverty, slums and squatter settlement and the dwindling public resources made it clear that government alone cannot provide adequate and affordable housing as intended in the housing policies and hence the need to seek for alternative housing strategy that can be used to facilitate it and same concern was expressed both globally and regionally and this led to the birth of PPP as a strategy for housing delivery and it gained prominence in Nigeria in Urban Development and Housing Policy of 2002.

PPP is a collaboration between government and its agencies and private sector wherein resources are pooled together by both parties for housing delivery and the partnership is being by memorandum of understanding (MoU) being executed by the parties which contains details of their obligations and responsibilities which will include the nature of housing projects, the role of parties and their contributions as well as equity benefits (Ibem, 2011). However, there are operational laws such as Infrastructure Concession & Regulatory Commission (ICRC) Act 2005, Public Procurement Act 2007, National Policy on PPP in Nigeria launched in 2009, guidelines issued by ICRC governing PPP & ICRC in 2012 and the provisions of Land Use Act (LUA) 1978 as amended in 2004 all of which acts as guidelines to the formulation and operations of the MoU and the process of the execution of the projects.

To ensure the success of PPP in housing delivery Yahaya and Ibrahim (2019) provided what they referred to as "critical success factors " and these are: favourable legal framework, commitment/responsibility of public/private sector, project technical feasibility, technology transfer, good governance, competitive procurement process, transparency procurement process, financial capability, available financial market, stable macro-economic conditions, involvement of civil society, an efficient approval process, sound economic policy, stable political environment and strong political support. The authors sequel to the study of the implementation of the strategy made a positive assertion on the capacity of the strategy to deliver adequate and affordable housing if the success factors are followed.

2.5.1 Public Private Partnership Models for Housing Development.

PPP models for housing development represents packaging of relationships, obligations, responsibilities, benefits and risks that are shared between the public and private sector towards achieving increased supply of decent, adequate and affordable housing especially for the low-income earners whose level of income cannot enable them to be able to acquire

decent and adequate from the market either for rent or purchase, the knowledge of these models therefore provide a platform for the contracting public and private sectors to be able to be able to draw the memorandum of understanding.

UN-HABITAT (2011) provides the following PPP models for housing and these are: Design-Build (DB), Build-Finance (DF), Build-Own-Operate (BOO), Design-Build-Finance-Maintain-Operate (DBFMO), Design-Build-Finance-Operate (DBFO), Operation and Maintenance Contract and Concession, the responsibilities of the private sector in these models as stated by UN-HABITAT are as presented in the Table 2.6

Table 2.6 PPP Housing Development Models by UN-HABITAT

S/No	PPP Model for housing development	Responsibilities of the private sector
1	Build-Own-Operate	The private sector finances, builds, own and operate a facility in perpetuity, public constraints are stated in the original agreements and throughout on-going regulatory authourity.
2	Design-Build-Finance-Operate	The private sector designs, builds, finances and operate an asset and provides hard facility management services under a long-term agreement
3	Design-Build-Finance-Maintain- Operate	The private sector designs, builds an finances an asset and provides hard and/soft facility management services as well as operates under a long-term agreement.
4	Build-Finance	The private sector constructs an asset and finances the capital cost only during the construction period
5	Design-Build	The private sector designs and build infrastructure to meet public sector performance specifications, often for a fixed cost so that the risk of cost over-run is transferred to the private sector
6	Finance Only	A private entity, usually a financial a financial service industry, funds a project directly or uses various mechanisms such as long-term lease or bond issues.
7	Operation and Maintenance Contract	A private sector under contract operates a publicly-owned asset for a specified term, ownership of the asset remains with the public entity
8	Concession	A private sector concessionaire undertakes investment and operates the facility for a fixed period of time after which the ownerships reverts back to the public sector.

Source: UN-HABITAT (2011)

The government of India through its Ministry of Housing developed six PPP models towards achieving affordable housing, project structure, risk sharing matrix and activity flow chart for each model, these models captures the roles of the public and private sector and they are Government-Land Based Subsidized Housing (GLBSH),Mixed Development Cross-Subsidized Housing(MDCH), Annuity Based Subsidized Housing (ABSH), DBFMT-Annuity cum Capital Grant based Subsidized Housing (AGSH), Direct Relationship Ownership Housing (DROH), Direct Relationship Rental Housing (DRRH), the synthesis of the models are presented in Table 2.7

Table 2.7 Analysis of PPP Housing Development Models Developed by MOH, India Based on Scope of Work

PARAMETERS	GLBSH	MDCH	ABSH	AGSH	DROH	DRRH
Designing and Building of units	Private Partner	Private Partner	Private Partner	Private Partner	Private Partner	Private Partner
Maintenance of units	Beneficiaries	Beneficiaries	Beneficiaries	Beneficiaries	Beneficiaries	Beneficiaries
Distribution of units	Private partner to public authority	Private partner to public authority	Private partner to public authority	Private partner to public authority	Private partner to public authority	Private partner to public authority
Development mix	Affordable housing	Affordable housing & high-end housing/commercial development	Affordable housing	Affordable housing	Affordable housing	Affordable housing
Responsibility of trunk infrastructure	Public authority	Public authority	Public authority	Public authority	Public authority	Public authority
Implementation of Trunk infrastructure	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement	Separate EPC or PPP arrangement

Source: Ministry of Housing, India

Table 2.7 presents a synthesis of the six PPP housing development models developed by the government of India through its Ministry of Housing, six major tasks were captured as well

as the allocation of responsibilities between the public and private sectors and the beneficiaries.

PPP housing development models as presented in Table 2.8 were structured using project time period which is referred to as project structure and this was captured in Table 2.8

Table 2.8 Analysis of PPP Housing Development Models Developed by MOH, India Based on Project Structure

PARAMETERS	GLBSH	MDCH	ABSH	AGSH	DROH	DRRH
Land provision	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)	Public authority (on long term lease)
Lease period	30 to 99 years for affordable housing	30 to 99 years for affordable housing and commercial component	30 to 99 years for affordable housing	30 to 99 years for affordable housing	30 to 99 years for affordable housing	30 to 99 years for affordable housing
Contract period from condition precedent	2 to 4 years	2 to 4 years	2 to 4 years	2 to 4 years	2 to 4 years	2 to 4 years
Bid parameter	Per unit cost (lowest lump-sum amount)	Per unit cost (lowest lump	sum amount)	Per unit cost (lowest lump	sum amount)	Per unit cost (lowest lump
Offtake responsibility	Public authority	Public authority	Public authority	Public authority	Private partner	Private partner
Performance Risk	Private partner	Private partner	Private partner	Private partner	Private partner	Private partner

Source: Ministry of Housing, India

Table 2.8 indicates the project structure of the PPP housing models, the public provides land on a long lease and provides offtake, the private sector bears performance risk while the contract period is for a maximum period of 4years.

Financing arrangements between the public and private sector for PPP housing development models was captured in Table 2.9

Table 2.9 Analysis of PPP Housing Development Models Developed by MOH, India Based on Financing Arrangements

PARAMETERS	GLBSH	MDCH	ABSH	AGSH	DROH	DRRH
Financing	Private partner	Private partner	Private partner	Public authority and Private partner	Private partner	Private partner
Recovery by developer	Govt. pays private partner lump sum amount on completion	Revenue generated from high-end housing	Govt. pays long-term annuity to private partner on completion	Govt. pays upfront grant and annuity to private partner	Beneficiaries pay (Lump-sum or EMI) to private partner	Beneficiaries pay monthly rent to private partner
Support/subsidy for developer	Land	Land	Land	Land	Land	Land
Cross subsidy for developer	Not Applicable	Land providing for high end housing	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Offtake related performance bonus for developer	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	10%-15% performance bonus linked to the no of units sold	Not Applicable	Not Applicable

Source: Ministry of Housing, India

Table 2.9 presents the financing arrangements of the models, the private sector is responsible for financing of projects except under the AGSH model where both the public and private sector finances the project, for models GLBSH, ABSH and AGSH government pays the developer under recovery, the developer makes recovery from the beneficiaries under DROH and DRRH while recovery is made by the developer under MDCH through revenue from high-end housing.

Table 2.10 provided criteria for the selection of beneficiaries for housing developed through PPP, for each PPP housing development models, parameters are provided for determining beneficiary's eligibility.

Table 2.10 Analysis of PPP Housing Development Models Developed by MOH, India Based on Beneficiaries' Criteria's

PARAMETERS	GLBSH	MDCH	ABSH	AGSH	DROH	DRRH
Beneficiary eligibility	Public authority	Public authority	Public authority	Public authority	Public authority	Public authority
Beneficiary identification	Public authority	Public authority	Public authority	Public authority	Private partner	Private partner
Payments by beneficiaries	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Lump-sum or EMI to Public authority	Rent to Private partner
Sourcing of funds by beneficiaries	Financial Institutions/Monthly income	Financial Institutions/Monthly income	Financial Institutions/Monthly income	Financial Institutions/Monthly income	Financial Institutions/Monthly income	Monthly income

Source: Ministry of Housing, India.

Table 2.10 is focused on the beneficiary's criteria, herein, the public authority determines the eligibility of beneficiaries and identification, this, it is implied, is to ensure that the targeted group which is the low-income are able to access the housing, mortgage arrangements is made by the public and monthly deductions from the beneficiaries' income are paid into the mortgage account.

The various models of PPP for housing development indicates the various degrees of participation of the private sector in housing provision, however, caution must be made not to get into privatization since the motive is to provide affordable housing especially for the low-income earners who are not able afford housing from the open market with their level of income.

2.5.2 Guiding Principles for Successful Implementation of PPP for Housing Development

To ensure successful implementation of PPP for housing development, eight principles are being provided and these are that the interest of the public must be paramount, establishment and adherence to good practices in accountability and transparency throughout the life of the project, PPP projects to be well planned, well-defined in scope and objectives, clearly laid set of criteria which is to be a platform for the measurement of the viability of the project and for determining its potential suitability of PPP procurement, the PPP model to be selected must provide value for money in terms of cost and time savings with appropriate consideration for risk transfer, competitiveness, fairness and due diligence in tendering process, urban sector PPP to take cognizance and reflect the needs of the affected community as well as ensuring the integration of the priorities of key stakeholders into the project and ensuring responsible management throughout the term of the agreement taking cognizance of the predictabilities and priorities as determined by the partners (UN-HABITAT,2011). These principles are consistent with international experiences of countries such as Canada, Australia, Kolkata, USA, UK, Malaysia, Indonesia and Thailand in their adoption of PPP for the provision of social housing (Adusumuli, 1999; Boase, 2000; Choe, 2002; Canadian Council for Public-Private Partnerships, 2003; Susilawati & Armitage, 2004; Brown *et al.,* 2006; Sengputa, 2006).

The guiding principles are further being grouped into five groups to cover different stages of PPP projects and these are principles of partnership for the preliminary stage, principles guiding the selection of suitable type of partnership, Principles in the stage of project launch and selection of partners, principle in the stage of contract design and principle in the stage of contract implementation and evaluation (Abeer, 2017)

Abeer, 2017 developed guiding principles for five stages of PPP housing projects, the synthesis of the principles is presented in Table 2.11

Table 2.11 Guiding principles for the five stages of PPP housing project

S/N	TYPES OF PRINCIPLE	FEATURES OF PRINCIPLE
1	Principles of partnership in preliminary stage (Prepare for the application of the partnership with the private sector):	• Defining project objectives and the requirements of each partner • Existence of political support and clear national and local legal and regulatory structures for partnership system • Compatibility between the kind of proposed projects and the strategies of international donors and financial institution • Approval of PPP unit for Participatory project after ensuring that the project is sustainable and take the standard of partnership into consideration, in addition to achieve high returns. • Private sector's interest in participating to achieve an adequate return through incentives provided by the government.
2	Principles in the stage of selection suitable type of partnership	• The objectives each partner (state – private sector). • Type of project and its goals: selection of an appropriate project for the participation is subjected to some criteria like previous experience of the private sector in Similar projects, the priority of the project to meet the needs of the population, high cost of project and less financial ability of the government. • The advantages and disadvantages of each type of partnership • Determine the kind of risks such as (change in costs value – reducing in demand of services projects - delay in project implementation time - Natural hazards – technological risks - non-compliance with the laws and requirements). Furthermore, identification who bears the risks which facing the projects (Miles, et al., 2000). • Type of required tasks from private sector such as (project design – construction – financing – operation – maintenance – marketing – risk management).

		• Available allocated budget for project (salaries of employees – cost of utilities –cost of building materials...) and the amount of required saving to cover other projects.
3	Principles in the stage of project launch and selection of partners:	• Identification of Project needs such as technical needs (innovative design – technical standard – management, follow-up and maintenance), in addition to Financial needs (Finance – expected risks like planning risks, construction risks, financial risks, demand risks and legislative risks – returns for partner and society).
		• The announcement of tender for the project.
		• Discuss and evaluate offers from the private sector.
		• Selection the right partner for project: the government select the right partner according to the optimal price which Posed by the private sector for the housing unit which must be less than the housing price when the government implements the same project, in addition to private sector contribution in reducing total costs during the life cycle of the project.
		• The agreement of Authorities and funders.
4	Principles in the stage of contract design	• Identification the roles of each partner.
		• The required specifications
		• Period of contract.
		• Bearing the risks.
5	Principles in the stage of project implementation and evaluation	• Contract management: Achieve the role of each partner as described in the contract.
		• Project management: (monitoring the quality of product – performance management – risk management – financial management – government control).

Source: Abeer, 2017

Table 2.11 contained the highlights of the items to be guided by under the principle for each stage of the project implementation, the groupings of these principles will make easier for application and implementation and it's also more elaborate when compared to the mode of general presentation by UN-HABITAT, 2011.

2.5.3 Institutional and Legal Framework for Enhancing the Efficiency and Effectiveness of PPP in Housing Delivery

To ensure creditability and confidence of stakeholders in the implementation of PPP, it becomes imperative to put in place institutional framework for the purpose of initiation, administration, control and accountability of PPP projects in order to meet international best practices and institutional arrangements in most countries includes a dedicated PPP unit and relevant government ministries, agencies and departments for procurement and execution of PPP projects (Verhoest *et al.,* 2014; Gbadegesin, *et al.,* 2016) identified three major PPP supporting institutions and their expected features and these are(1)Organization of PPP dedicated bodies with features such as existence of PPP unit, statute of PPP unit, tasks/responsibilities of PPP unit and size of PPP unit, (2)procedures for PPP project appraisal and role allocation and the features are third party approval of project approval prior to tendering procedure and before final contract is signed (3) standardized processes and documents and the features are use of standardized contracts, use of standardized project models and use of standardized tendering procedures. Apart from putting the institutions in place, it is equally imperative that the institutions are being managed professionals of repute in order to ensure the confidence of investors and attract large-scale projects (Arimoro, 2020).

The existence of a good legal framework is an important element for the implementation of an efficient, effective and result-oriented PPP for housing provision, Verhoest *et al.,* (2014) stated three components of legal framework and their features and these are (1) legal PPP

framework with features such as explicit general PPP or concession law, public procurement law (2) scope and boundaries of specific PPP law and the features includes definition of PPP, sectors and types of infrastructure/ services concerned, competent contracting authorities and eligible private party (3) elements provided in legal agreements and this includes features such as contract termination events, compensation provisions, provision for collection of fees or payment by government, public authourity to support and provide guarantees and step-in rights for lenders or substitution by a new private partner.

In Nigeria, following the recognition of the need to engage the private sector in partnership with the government for infrastructural development, provision of services, housing etc., legal and regulatory framework was put in place which includes Infrastructure Concession Regulatory Act (ICRC Act, 2005) which provided a legal backing for ICRC, the Public Procurement Act, 2007 which led to the establishment of National Council on Public Procurement (NCPP) and the Bureau of Public Procurement (BPP) which are regulatory bodies that are responsible for monitoring and oversight of public procurement in Nigeria. The ICRC Act provided the necessary framework within which Ministries, Departments and Agencies (MDAs) can enter into contractual agreement with the private sector in the financing, construction operation and maintenance of infrastructure projects, it also developed guidelines, policies and procurement processes in the country and states are to work closely with ICRC in developing their PPP policies in order to ensure consistency, best practice and coordinated approach to the private sector supplier market (Rose *et al.,* 2017)

2.6   Empirical Studies on Public Private Partnership for Housing Provision in

Nigeria

This study has reviewed literatures on the concepts of PPP, adequacy, liveability and affordability, habitability, housing and public housing, literatures on types of PPP, importance of PPP, legal and institutional frameworks and challenges on the implementation of PPP. This section reviews empirical studies that were carried out by researchers on the implementation of PPP for housing provision in Nigeria and the studies were selected from North East, South East, North Central and South West of Nigeria.

 Ibem (2010) undertook Assessment of the Role Government Agencies in PPPs in Housing Delivery in Nigeria, the study focused on 13 government agencies in 6 selected cities and these are Lagos, Abeokuta, Port Harcourt, Owerri, Uyo, and Umuahia, the study was undertaken with the aim of the gap in literature with respect to the role of government agencies in PPP in Nigeria. The study identified two types of PPP housing provision schemes and these are site & services scheme and Turn key housing and three groups of principal actors were also identified, the first group consist of Federal Ministry of Environment, Housing & Urban Development, Federal Housing Authourity and Federal Mortgage Bank, the second group consist of state government agencies comprising of housing and property development corporations and primary mortgage institutions and the last group consist of private developers, building contractors and housing financing institutions such as primary mortgage institutions and commercial banks, it was further revealed by the study that the site & services schemes provided a total of 2,000 plots while housing consist of 250 low-income housing, 1,195 and 1,633 housing units for the medium-income and high-income groups, from the executed MoUs and the Development Lease Agreements (DLAs) the role of the public agencies with respect to the site and services schemes was the provision of land while the private sector sub-divided, provided road, power and water and allocated the plots to

subscribers while for the housing, the roles of public agencies includes publication of expression of interest, screening of applicants, execution of MoU, provision of land (20% of the assessed value is construed as equity contribution while the developer pays 80%) and monitoring, the joint venture model was adopted by the state governments and the study rated the public agencies low in terms of performance.

Ibem & Aduwo (2012) carried out study on Public-Private Partnerships in Nigeria: Evidence from Ogun state, the study examined the prospects and challenges of PPPs in housing provision in Ogun state, south west of Nigeria. The research adopted the qualitative approach for data collection with data collected through interviews, literature review and official records and the research spanned between June, 2008 and February,2010, the study engaged the operators of PPP in housing provision in Ogun State, Ogun state ministry of housing and Gateway City Development Company Limited representing the public sector and Spark light Property Development Company Limited and Grants Property Limited, the two key private sector property developers, for the selection of participants, job designation, qualification, experience and length of service were some criteria adopted. The identified joint venture as the PPP model used, identified the role of the public to include provide land at subsidized cost, road and power, set target and standard and ensure compliance, carry out supervision and monitoring role, provide legal and economic policy frameworks and creation of awareness about the project and marketing of completed housing units, it identified the roles of the private sector to be: payment for the cost of the land and sundry charges, compliance planning regulations in the design and construction of the housing, undertake the design and physical construction, funding of construction works, marketing, allocation of the completed housing units, set the prices of the housing units and management. The observed that the PPP housing has been targeted at the high-income earners while the challenges of low-income housing and affordability has were not addressed, the study identified inadequate supply of

land and finance by government, high cost of building materials, graft and the exclusion of the low-income earners as the challenges militating successful implementation of PPP in the state and it recommended the involvement of organizations that represent the low-income earners in the institutional framework of PPPs.

Richard *et al.,* (2015) carried out study on the Evaluation of PPP in Housing Provision in Minna and FCT Abuja, five PPP housing projects were considered with located in the FCT and one Minna consisting of a total of 1,601 housing units and 40% was used as sample size, interview and structured questionnaire which was administered to 640 respondents was used to collect data with 521 questionnaires retrieved which represents 84.4%, descriptive statistics was used to analyze the data, the study revealed that 40.9% of the respondents contribute between 31-40% of their monthly income to housing repayment, 19.8% contribute between 26-30% to housing, 17% contribute between 21-25%, 10% contribute between 16-20% and 12.5% contribute between 10-15% to housing, the study stated that on a general level the housing produced through PPP are not affordable and more specifically, the housing are not affordable to the respondents who are in fall into the low-income group, lack of accessibility to land and finance were of the challenges identified by the study and it recommended that should provide appropriate policies to attack the multi-faceted challenges bedeviling the successful implementation of PPP for affordable and satisfactory housing especially for the low-income earners.

Jiya *et al.,* (2018) undertook a study on Analysis of Public and Private – Sectors Partnership (PPP) in Housing Delivery in Niger State. The study examined the individual significant contribution of the public and private sectors in PPP in housing contracts in Niger state, the study made use of reconnaissance survey structured questionnaire and interview for data collection and it focused on three PPP housing projects which are Talba Housing Estate, Minna, Aliyu Makama Housing Estate, Bida and Bako Kontagora Housing Estate, Kontagora

and the questionnaires were directed to officials and staff of Niger State Housing Corporation and the developers of the three housing estates, the study engaged the use of descriptive statistics in analyzing the data and the result revealed that 97% of the respondents held that PPP housing is not economically viable, 38% held that the housing is very inadequate, 26.8% inadequate, 19% fair and 16.7% adequate while no respondent viewed the housing as very adequate, with respect to affordability of the housing, no respondent considered the housing as being affordable, 5.6% considered the housing as fairly affordable, 94.4% considered the housing as not affordable and no respondent considered the housing as very affordable, it stated the following as the shortcomings: poor policy and corruption of the public sector, high cost of building materials, inadequate performance of mortgage bank and high interest rate from the developers, organizational constraints and non-adherence to planning standards and recommend that government should provide enabling environment for the private sector to thrive amongst others.

Awodele (2018) carried out an Assessment of Risk Involved in Housing Projects Procured Using PPP System in Nigeria, the study made use of questionnaire to collect data from construction professionals who are architects, engineers, builders, quantity surveyors and contractors as well as officials of government parastatals who are involved PPP housing projects in Lagos state, the study identified 45 various risks that are associated with PPP housing projects and used descriptive statistics to analyzed the data obtained, the revealed that force majeure (MIS 3,86), unstable government (MIS 3.73), construction failure (MIS 3.67), construction cost over-run (MIS 3.60) and land acquisition (MIS 3.54) occupied the first five positions while rate of returns restriction(2.92), inconsistences in government policies (2.90), tariff change (2.83) high building cost (MIS 2.73).competition risk (MIS 2.71) occupied the last five positions. The study recommended effective management and affordability test from the beginning.

Ige & Ohiro (2018) carried out study on PPP Residential Estates: Assessment of Users' Satisfaction with respect to Oba-Ile residential estate in Ondo State, with the use of Slovin formula, the study used a sample size of 92 from a population size of 225 while systematic random sampling technique was used in the selection of the respondents, descriptive statistics and factor analysis was used in analyzing the data obtained, the study revealed from the factor analysis, construction and design, neighbourhood and environmental facilities and accessibility are the major factors to be taken cognizance of as affecting users satisfaction and Relative Importance Index revealed that life and property safety, privacy management and dwelling space are the most important factors that influenced user satisfaction.

Yakubu *et al.,* (2016) carried out study on An Assessment of Public Private Partnerships for Housing Projects in Bauchi, North Eastern Nigeria, the study was undertaken to examine the performance of PPP in the provision of housing using Unity Housing Estate as a case study, the study made use of semi-structured interview and direct observation for data collection. The study revealed that the model of PPP adopted was Design-Build-Finance (DBF), an arrangement where the developer undertakes the design, building and financing of the housing, the study further revealed that the project was initiated in 2009 was to deliver 1,000 housing units in three phases as follows: phase one, 571 housing units and this phase was to be delivered 3 stages of 288 units, 171 units and 112 units, as at the time of research in 2016 (7years after the commencement of the project), the study revealed that stage 1 which consisted of 288 units had been completed and commissioned, stage 2 with 171 units was at finishing stage while stage 3 was at the DPC level and that the housing estate lacked infrastructural facilities. The study made the following findings:

Firstly, that the government was to provide land, pay compensation, provide bank guarantee and infrastructure, the land was provided but the government could not pay the compensation and requested the company to pay an undertaking to refund but it was stated it had not been

refunded as at the time of the research, secondly, government was to provide infrastructure and the cost of housing units were to be N3.4M for 2bedroom and N4.95M for the 3bedroom but the state government failed to provide the infrastructure and the developer sourced for fund to provide it and the cost was transferred to the housing cost and made it N4.2M for 2bedroom and N5.9M for the 3bedroom, thirdly, the housing were not affordable, fourthly, the level of satisfaction was low. The study recommended attitudinal change among stakeholders and the establishment and empowerment of anti-graft agency to fight corruption among others.

Yahaya & Ibrahim (2019) carried out a study on Critical Factors for Implementation of Public-private Partnership for Affordable Housing in Nigeria, the study make use of questionnaire which was administered to 256 respondents who were professionals in various PPP professions in housing provision in the Federal Capital Territory, the study stated that PPP has not made significant contribution to affordable housing and that it only benefited the medium and high income groups and failed to address housing provision for the low-income group which constitute the majority. The study identified the key constraints to affordable housing in Nigeria to include land accessibility and affordability, corruption, lack of legal framework, funding and unstable price of building materials, it also identified effective procurement process, strong private sector, project economic viability and sound financial package as the influential success factors, the recommended that government should provide land at no cost, provision of local building materials at little cost, provision of more financial institutions at little or no interest rate, establishment of an effective mortgage delivery system, introduction of assisted self-help and incremental housing into the PPP housing delivery system and that it will ensure better result through delivery of large scale affordable housing.

Mahmood & Anifowose (2019) undertook a study on the Evaluation of Factors Affecting the

Implementation of PPP in Housing Provision in Niger state between 2008 to 2017, the study has as its objective the identification of the outcomes resulting from the implementation of PPP in housing provision and evaluation of the factors behind the outcomes. The engaged what it referred to as case study design and collected data via structured questionnaire that was administered to 150 built-environmental professionals in both public and private sector organizations that were randomly selected with focus on project conception and implementation, the study utilized descriptive statistics in analyzing the data, the responses were summarized into four groups which are political, financial, project and environmental factors and the same categorization was used for the output, the outcome revealed a weak institutional base, lack of viable partners and poor quality housing projects which the study attributed to limited knowledge of PPP among personnel and poor coordination among PPP coordinating agencies, the study recommended that public sector PPP agencies such as Niger State Housing Corporation (NSHC), Niger State Public Procurement Board (NSPPB) and Bureau of Public Private Partnership(BPPP) to be extensively in trained in contemporary PPP management process and that NPPB be strengthened with necessary resources to execute it mandate.

Nubor (2020) carried out a study on public private partnership as a tool for the provision of social housing in Port Harcourt, the made use of questionnaire which was administered to the officers of River state ministry of housing and urban development, River state housing development authourity, officials of Private indigenous Real Estate Development Companies and banks, owners and occupants of PPP housing projects in Port Harcourt and Bureau of Public Private Partnership with a total number of 100 questionnaires and 90 questionnaires being retrieved and descriptive statistics was used in analyzing the data. The study indicated that the selling prices of the housing as follows: N25M for 1Bedroom, N32M for 2Bedroom and N42M for 3Bedroom in respect of Golf Estate, Port Harcourt while Rainbow Estate has

the selling prices to be N27M for 1Bedroom, N38M for 2Bedroom and N48M for the 3Bedroom. The study further revealed percentage of the beneficiaries as follows: Low-income earners 0%, Medium income earners 16.6% and High-income earners 83.3%, the study asserted that PPP housing is beneficial to the high-income group, a position which the study stated agreed with Ahmed et al (2020), it further stated that investors are losing interest in PPP for housing because it is not profit oriented. To mitigate the situation the study recommended that Non-profit organizations should be included in social housing PPP, better risk allocations between parties, commitment of the public sector in terms of policy and regulation

From the empirical studies reviewed above, there are great similarities in the operational difficulties and challenges on the part of both sectors, while there is need proper legal and institutional frameworks to be put in place by the public sector, there is also the need for training of government agencies on the management of PPP in order to ensure harmony and proper coordination among government agencies that are involved in PPP.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1   Sources of Data

Primary data was used through the administration of questionnaire and interview to obtain data from Niger State Housing Corporation (NSHC), Niger State Public Procurement Board (NSPPB), Public Private Partnership Office and beneficiaries of M.I. Wushishi housing estate and Talba housing estate

3.2   Research Design

Three sets of structured questionnaires were designed to obtain relevant data. The first set of questionnaire was to principal officers of NSHC, it is divided into two major parts A &B, part A relates to data on the respondent while part B consist of structured questions relating seven areas such as functions of NSHC under PPP, Assessment of the performance of NSHC under PPP and this is a 5point Linkert scale, factors that affects that affects the performance of NSHC which is also 5point Linkert scale, factors that affects the inability of allottees of Aliyu Makama and Bako Kontagora housing estates and the severity of the factors and 5point Linkert scale was used for the set of questions. (see appendix I)

 The second set of the questionnaire was directed to the residents of the public housing. This consists of two parts: Part A was designed to collect data with respect to the occupants while Part B focused on data with respect to 30 physical and non-Physical attributes of the housing with the provision of a 5-pont Linkert scale for assessment as well as rating of housing delivery strategies. A total number of 285 Questionnaires were administered while 245 questionnaires were returned and this translates to 85.96% response rate (see appendix II)

The third set of questionnaires was interview questionnaire which was designed to collect data from principal officers of NSHC, NSPPB and PPP office who by their schedules are unable to attend to the other questionnaire (see appendixes III, IV & V)

3.3 Study Population and Data Requirements

The population of the study consists of officials of Niger State Housing Corporation (NSHC), Niger State Public Procurement Board (NSPPB), PPP office, and the residents of public housing estates which are General M.I. Wushishi and Talba Housing Estates, data on Aliyu Makama housing estate, Bida and Bako Kotangora housing estate, Kotangora were obtained from the officials of NSHC and PPP office since they have not been occupied since 2010 even though majority of the housing units have been completed and allocated.

Data requirement, for PPP agencies, the data required focused on the identification of identification of PPP housing projects, units planned and developed, identification and evaluation of the roles of NSHC, challenges on the implementation of PPP while for the beneficiaries of the housing estates, the data required centered on assessment of adequacy and liveability of the housing units and estates as well as the income of the beneficiaries.

3.4 Sampling Frame

The sampling comprises of officials from Niger State Housing Corporation and the residents of public housing, the offices of Niger State Public Private Partnership and Niger State Public Procurement Board.

Table 3.1 Summary of the sampling frame

S/N	Composition	No(s)
i.	Niger State Housing Corporation (NSHC)	17
ii.	Niger State Public Procurement Board (NSPPB)	2
iii.	Office of the PPP	2
iv	Residents of M.I. Wushishi Housing Estate	500
v	Residents of Talba Housing Estate	500

Source: Author's Field Survey, 2019.

3.5 Sampling Size

The sample size for the public housing estate was 285 and this was derived from the use   of the Taro Yamane's formula as shown below:

Formula for sample size: $n = \dfrac{N}{1 + N(e)^2}$ Equation 3

Where:

n = sample size

N = Population size

e = confidence level

premised on the population of the occupiers of M.I Wushishi and Talba Housing Estates which is 1000 occupants, the number of questionnaires to be administered is 285.

3.6 Sampling Technique

Both purposive and random sampling techniques were used. Purposive sampling technique was used in the selection of target population with respect to NSHC, NSPPB and PPP office where principal officers, departmental heads and some other officers which are considered to be in position of requisite knowledge of public housing developments in the state were

selected. On the other hand, simple random sampling was used to select the respondents from the housing estates after the derivation of the sampling size. A total of 285 questionnaires were administered and 245 questionnaires were retrieved which represents 85.96%.

3.7   Method of Data Collection

Objective 1: Identification of the type of PPP adopted between 2007 to 2015 and the housing units planned and developed within the afore-mention

The data was obtained from the administration of questionnaires and interviews with the officers of NSHC, NSPPB and PPP office (See appendixes I, III, IV &V)

Objective 2: Assessment of the liveability and adequacy of the housing being developed to the occupiers.

 The data in respect of this objective was obtained from the administration of questionnaires to the residents of M.I Wushishi and Talba housing estates who were selected through simple random sampling after the derivation of the sample size

Objective 3: Evaluation of the affordability of the public housing to the occupiers.

Data on the income of the occupiers and length of service was obtained from the questionnaires administered to the occupiers, data on monthly mortgage repayment and housing price was obtained from the records of NSHC while data on the salary of the occupiers was obtained from the approved Niger State Salary Structure for civil service.

Objective 4: Assessment of adequacy of PPP strategy adopted and evaluation of the performance of NSHC under the strategy.

The data was principally derived from the administration of questionnaire to the principal officers of PPP office, NSHC and NPPB (see appendix I).

3.8   Method of Data Analysis

The data in respect of objective 1 which is identification of the type of PPP adopted between 2007 to 2015 and the housing units planned and developed within the afore-mention was analyzed with the use of descriptive statistics and table to present the housing units planned and developed, while percentages, mean score and Relative Importance Index (RII) was used in analyzing objective 2 which is assessment of the liveability and adequacy of the housing being developed to the occupiers. For the evaluation of the affordability of the public housing to the occupiers which is objective 3, descriptive statistics, tables and percentages were used to analyze data on monthly repayment, house price, salary income from Niger state civil servant's salary structure to determine housing affordability while objective 4 which is assessment of adequacy of PPP strategy adopted and evaluation of the performance of NSHC under the strategy, descriptive statistics, tables were used to present data on the functions of NSHC under PPP strategy while mean score was utilized to analyzed performance evaluation variables, factors that influences the performance of NSCH, the severity of the factors that affects non-occupation of some housing estates.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSION

4.1   Preamble

This chapter is an analysis of the data collected from the field and it focused on the evaluation of the PPP housing delivery strategy being adopted, the perception of the occupiers on the lievability, adequacy and affordability of the housing units being developed through the strategy as well as the role and performance of NSHC under the strategy.

4.1   Identification of the PPP Housing Strategy adopted between 2007 to 2015 and Evaluation of Housing Projects Developed.

Table 4.1: Housing delivery between 2007-2015

S/No	Location	No planned	No constructed	% Achievement	Housing strategy Adopted
1	Minna	10,000	1000	10	Built and Transfer
2	Suleja	10,000	300	3.0	Built and Transfer
3	Kontagora	5,000	250	5.0	Built and Transfer
4	Bida	5,000	250	5.0	Built and Transfer
5	New Bussa	4,000	100	2.5	Built and Transfer
6	Baro	5,000	100	2.5	Built and Transfer
7	20other local governments	180,000	-	-	Built and Transfer
	Total	**219,000**	**2,000**	**0.91**	

Source: Field Survey, 2019

Table 4.1 indicates that the built and transfer model of public private partnership (PPP) was adopted in the development of all the housing estates, it also indicates an overall achievement of 0.91% which is below 1.0%. Minna, the state capital recorded the highest success with

10%, followed by Kontagora and Bida with 5%, Suleja with 3%, New Bussa and Baro 2.5% and zero success in the other twenty local government. The study revealed that the 10% success recorded in Minna was as a result of the development of M.I. Wushishi and Talba housing estates each with 500 housing units, the study further revealed that completion of these two estates was to quickly score political goal by the administration of Ibrahim Babangida Aliyu. The study further revealed that the completion of M.I. Wushishi and Talba housing estates were as a result of special intervention by the state government when the developers could not fulfill their contractual obligation as a result of their inability to provide fund as contained in the agreement, it was also revealed that 40% of the developer's obligation was undertaken by NSHC to complete the estate. On the other hand, Aliyu Makama housing estate, Bida and Bako Kotangora housing estate, Kontagora which commenced in 2009 are yet to be occupied as at 2019, exposing the completed housing units and the entire estates to various degrees of deterioration.

The reasons responsible for the poor performance of the strategy as discovered by the study include: lack of financial capacity by the developers, submission of fake profile by developers, lack of technical capacity by developers, reliance on political god-fatherism, failure to conduct due diligence on developers before award of contract, lack of stringent enforcement of the terms of contract and politicization of the entire process. The failure of PPP as housing development strategy as indicated above shows lack of economic viability of the housing development to the private sector and this aligns with the positions of Craig & Porter, 2006; Seisedos, 2009; Campbell, 2011; Rolink, 2013; Jiya *et. al.,* 2018.

4.2   Assessment of the Liveability and Adequacy of the Housing being Developed to the Occupiers

This section deals with analysis of the responses of the questionnaires on livability and adequacy of that were M.I Wushishi and Talba housing estates that were administered to the

occupiers. A 5-point Linkert scale was adopted in analyzing the housing attributes with very adequate= 5points, adequate =4points, fairly adequate=3points, inadequate=2points and very inadequate =1point.

4.2.1 Analysis of liveability of M.I. Wushishi housing and Talba housing estates

The perception on the liveability of the respondents living in M. I. Wushishi and Talba Housing Estate in Minna, Niger State is shown in Table 4.2

4.2.2 Analysis of the responses on the adequacy of the facilities in the two- and three-bedroom flats at M. I. Wushishi and Talba housing estates.

Table 4.2: Perception on liveability of the occupants of m.i. wushishi and talba housing estates

Type of building	Responses	M.I Wushishi Housing Estate Minna	Talba Housing Estate Minna	Total	Means score	Rank
2 Bedroom flats	Very adequate	-	-	-		
	Adequate	14 (18.9%)$_a$	62 (73.8%)$_b$	76 (48.1%)	4.50	2
	Fairly adequate	60 (81.1%)$_a$	22 (26.2%)$_b$	82 (51.9%)	3.80	3
	Inadequate	-	-	-		
	Very inadequate	-	-	-		
	Total	74 (100.0%)	84 (100.0%)	158 (100.0%)		
3 Bedroom flats	Very adequate	-	-	-		
	Adequate	39 (79.6%)$_a$	30 (78.9%)$_a$	69 (79.3%)	4.70	1
	Fairly adequate	10 (20.4%)$_a$	8 (21.1%)$_a$	18 (20.7%)	3.50	4
	Inadequate	-	-	-		
	Very inadequate	-	-	-		
	Total	49 (100.0%)	38 (100.0%)	87 (100.0%)		
Average mean score					4.12	

Source: Field survey, 2019

Table 4.2 is the analysis of the responses of the occupiers on their perception of the adequacy of the facilities available in both estates is presented. Out of a total of 74 respondents living in two-bedroom flats at M. I. Wushishi Housing Estate 18.9 % perceived that liveability in the Estate was adequate while the remaining 81.1 % perceived it was fairly adequate, from the 84 respondents living in two-bedroom flats at the Talba Housing Estate 73.8 % perceived that liveability was adequate and 26.2 % perceived that it was fairly adequate. In comparing the two estates, it shows the occupiers of Talba housing estate are much more satisfied with the housing than the occupiers of M.I. Wushishi housing estate. On the average, 48.1 % of the respondents perceived that liveability was adequate and 51.9 % perceived that liveability was fairly adequate while in both estates, no respondents perceived living in the estate was inadequate. The proportions of the responses from the respondents in both housing estates were significantly different from each other ($p < 0.05$).

For the three-bedroom flats, 79.6% of the respondents living in M. I. Wushishi Housing Estate perceived that liveability in the estate was adequate while 20.4 % perceived it was fairly adequate,78.9% of the respondents living in Talba Housing Estate were perceived that liveability in this estate was adequate and 21.1 % perceived it was fairly adequate. In both estates, 79.3 % of the respondents perceived that living in the estates was adequate and 20.7 perceived it was fairly adequate. The proportion of the responses from the respondents living at M. I Wushishi and Talba Housing Estate were not significantly different from each other ($p > 0.05$).

Irrespective of the type of building, a total of 123 respondents living at M. I. Wushishi were administered questionnaire out of which 43.1 % perceived that liveability was adequate while 56.9 % perceived it was fairly adequate. A total of 122 respondents living in Talba Housing Estate were administered questionnaires out of which 75.4 % perceived that liveability was adequate in the estate while 24.6 % perceived it was fairly adequate to live in the estate. No

respondents, on the average, perceived that liveability in both estates was inadequate. The proportion of responses from M. I. Wushishi and Talba Housing Estate were significantly different ($p < 0.05$). These results confirmed that the respondents agreed that liveability of M.I. Wushishi and Talba Housing estates were adequate based on the average Mean Score of 4.12 that was obtained (see Table 4.2) and this agrees with the position of Mohit & Sule, 2015.

Table 4.3: Perception on adequacy of the building facilities based on five hedonic scale responses of occupants living in the two housing estates in Minna, Niger state

Type of building	Responses	M. I Wushishi Housing Estate Minna	Talba Housing Estate Minna	Total	Mean score	Rank
2 Bedroom flats	Very adequate	-	-	-		
	Adequate	0 (0.0%)$_a$	18 (21.4%)$_b$	18 (11.4%)	3.20	4
	Fairly adequate	65 (87.8%)$_a$	58 (69.0%)$_b$	123 (77.8%)	3.90	1
	Inadequate	9 (12.2%)$_a$	8 (9.5%)$_a$	17 (10.8%)	3.10	5
	Very inadequate	-	-	-		
	Total	74 (100.0%)	84 (100.0%)	158 (100.0%)		
3 Bedroom flats	Very adequate	-	-	-		
	Adequate	30 (61.2%)$_a$	10 (26.3%)$_b$	40 (46.0%)	3.48	3
	Fairly adequate	19 (38.8%)$_a$	28 (73.7%)$_b$	47 (54.0%)	3.70	2
	Inadequate	-	-	-		
	Very inadequate	-	-	-		
	Total	49 (100.0%)	38 (100.0%)	87 (100.0%)		
Average mean score					3.4	

Source: Field survey, 2019

The total number of valid responses considered for adequacy test amongst those living in two-bedroom flat at M. I. Wushishi Housing Estate was 74 out of which 87.8% perceived that the facilities in the flats were fairly adequate while the remaining 12.2% perceived that they

were inadequate. At the Talba Hosing Estate, out of the total of 84 valid responses for adequacy test 21.4% perceived that the facilities in the two-bedroom flats were adequate, 69.0% perceived they were fairly adequate and 9.5% perceived they were inadequate. The combination of the responses of respondents living in two-bedroom flats at both estates revealed that a total of 158 responses for adequacy test were valid of which 11.4% perceived that the facilities in the flat were adequate, 77.8% perceived they were fairly adequate and 10.8% perceived the facilities were inadequate. The comparison of the proportion of the responses from the two estates showed that there were significant differences $P < 0.05$ in the responses between the two estates.

Amongst those living in three-bedroom flats at M. I. Wushishi Housing Estate, 49 responses were valid for adequacy test out of which 61.2% perceived the facilities in the three-bedroom flats were adequate while 38.8% perceived they were fairly adequate. Amongst those living in three-bedroom flats at Talba Hosing Estate, 38 responses were valid for adequacy test out of which 26.3 % perceived that the facilities in the flats were adequate and 73.7% perceived that they were fairly adequate. In the combination of both estates, 87 valid responses for adequacy test were valid out of which 46.0% perceived that the facilities in the three-bedroom flats were adequate while 54.0% perceived they were fairly adequate. There were significant differences ($P<0.05$) in the proportion of the responses between the two housing estates.

Irrespective of the type of building, a total of 123 responses were valid for adequacy test of which 24.4% of the respondents perceived that the facilities in the at M. I Wushishi Housing Estate were adequate, 68.3% perceived they were fairly adequate while 7.3% perceived they were inadequate. At the Talba Housing Estate, 122 valid responses were considered for adequacy test out of which 23.0% perceived that the facilities in the flats were adequate while 70.5% perceived they were fairly adequate and 6.6 % perceived they were inadequate. The

combination of the responses of both housing estates resulted in 245 valid responses for adequacy test out of which 23.7% perceived that the facilities in the flats were adequate, 69.4 % perceived they were fairly adequate and 6.9% perceived they were inadequate. The proportion of responses between the two estates showed no significant differences ($p > 0.05$). These results confirmed that the respondents agreed that adequacy of the building facilities based on five hedonic scale responses of people living in two housing estates in Minna, were fairly adequate, based on the average Mean Score of 3.40 that was obtained (see Table 4.3), this outcome further confirms the position of Mohit & Sule, 2015 as stated earlier.

4.3 Evaluation of the Affordability of the Public Housing to the Occupiers.

This section analyzes the occupational distribution of the occupants, monthly income, length of service, mortgage repayment and affordability index.

4.3.1 Analysis of the occupational distribution of occupants of M.I. Wushishi and Talba housing estates.

Table 4.4: Analysis of occupational distribution of the occupants of M.I. Wushishi and Talba housing estates

House type	No of households	Civil servants		Non-civil servants	
		No	%	No	%
2 bedrooms	158	136	86	22	14
3 bedrooms	87	69	79	18	21
Total	**245**	**205**	**84**	**40**	**16**

Source: field survey, 2019.

From Table 4.4, the distribution of the occupation of the occupants shows that out of a total of 158 occupants occupying 2bedroom flats, 136 of the occupants are civil servants representing 86% while 22 occupants are non-civil servants which represents 14%, from the 3bedroom flats, out of a total of 87 occupants, 69 occupants are civil servants representing 79% while 18 occupants are non-civil servants which represents 21% , on the aggregate the total population of the occupants is 245 with civil servants being 205 which translates to 84% and non-civil servants is 40 occupants and this is 16%. As a result of the proportion of civil servants' occupants, Niger state civil service salary scale structure was used in analyzing the affordability of the housing estates.

4.3.2   Analysis of monthly income of occupants from M.I. Wushishi and Talba housing estates.

4.3.2.1 Analysis of monthly income of the occupants of 2Bedroom flats from M.I. Wushishi and Talba housing estates.

The responses of the occupiers to the salary range adopted in the questionnaire was used in determining the frequencies of the occupiers in each salary class and their corresponding percentages as contained in the table below.

Table 4.5: Analysis of monthly income of occupiers of 2Bedroom flats at M.I. Wushishi and Talba housing estates

Salary range	Frequency of Response	Percentage of Response
10,000 – 20,000	NIL	NIL
21,000 – 30,000	16	6.33
31,000 – 40,000	88	55.70
41,000 – 50,00	47	29.75
Above 50,000	13	8.22
Total	**158**	**100.00**

Source; Field Survey 2019

From Table 4.5, the total number of civil servants occupying 2bedroom flats from both estates is 158 occupants, the income group with the highest population is N31,000-40,000 with 88 respondents and it translates to 55.70%, followed by N41,000-50,000 with 47 occupants which is 29,75%, it is followed by above N50,000 with 13 respondents and this is 8.22%, N21,000-30,000 has 16 respondents representing 6.33% while there are none in the category of N10,000-20,000 salary range.

4.3.2.2 Analysis of response on monthly income of occupants of 3bedroom flats of M.I. Wushishi and Talba housing estates.

The frequency distribution of each of the salary range for occupants of 3bedroom flats of both estates are contained in the table below.

Table 4.6: Analysis of monthly income of occupants of 3Bedroom flats

Salary Range	Frequency of Response	Percentage of Response
10,000 – 20,000	NIL	NIL
21,000 – 30,000	NIL	NIL
31,000 – 40,000	36	41.34
41,000 – 50,000	36	41.34
Above 50,000	15	17.32
Total	**87**	**100.00**

Source Field Survey 2019

The Table 4.6 shows that none of the occupants of three-bedroom earns below 30,000 per month, 41.34% earns between 31,000 and 40,000, 41.34% earns between 41,000– 50,000 while 17.32% earns above 50,000 per month.

In contrast, Table 4.6 indicates that occupants of 3bedroom are more in the higher income range than the occupiers of 2bedroom flats, this shows the income of the occupants was taken into consideration in the allocation of the housing units, the implication of this is that it makes occupants to bear the financial burden appropriate for their levels.

4.3.3 Analysis of response on years spent in service

The analysis of the length of service of the civil servants from both estates is presented in the table below.

Table 4.7: Analysis of responses on the length of service for two-bedroom and three-bedroom flats M.I. Wushishi and Talba housing estates

Year range	Frequency	Percentage
5-10years	10	4.08
11-15years	40	16.32
16-20years	126	51.43
21-25years	39	15.92
Above 25years	30	12.25
Total	**245**	**100.00**

Source Field Survey 2019

From Table 4.7 4.08% are between 5-10 years in service, 16.32% are between 11-15 years in service 51.43% are between 16-20 years and 15.92% are between 21-25 years in service while 12.20 5% and above 25 years in service.

The implication of the above is that with the retirement age of 35 years in service all the occupants will be able to redeem their mortgage within the repayment period of 20 years as stated in the letter of award (See appendix VI)

4.3.4 Mortgage repayment and house prices of M.I. Wushishi and Talba housing estates

Data on house prices of 2bedroom and 3bedroom flats in both estates and their corresponding mortgage repayment amounts are presented in Table 4.8

Table 4.8: Mortgage repayment and house prices of M.I. wushishi and Talba housing estates

	MI WUSHISHI ESTATE			TALBA HOUSING ESTATE		
House Type ₦	Monthly repayment ₦	Price ₦ (Million)	Initial payment at 10% ₦	Monthly repayment ₦	Price ₦ (Million)	Initial payment at 10% ₦
2 bedrooms	10,000	1.9	190,000	15,000	3.3	330,000
3 bedrooms	19,000	2.9	290,000	25,000	4.3	430,000

Source Niger State Housing Corporation, 2019

Table 4.8 reveals differences in the monthly repayment of both two bedrooms and three-bedroom flats in the two estates as well as in their prices, the study gathered that the differences were as a result of differences in the cost of construction.

NB

1. The repayment period is for a maximum period of 20 years and 10% of the price shall be paid as initial deposit as contained in the letter of allocation

2. The letter of allocation also contains a provision that where the service period of an allottee is less than 20years, the balance will be deducted from the gratuity due to the allottee

3. The Aliyu Makama Estate Bida, Bako Kotangora Estate, Kontagora is undergoing revaluation and in the light of this, it was gathered that the units will have different prices and this implies the mortgage repayment cannot be determined now.

Table 4.9 Mortgage repayment in respect of M.I. Wushishi and Talba housing estates

Year	M.I Wushishi		Talba	
	2bd Price 1.9m Repayment 10,000	**3bd Price 2.9m Repayment 19,000**	**2bd Price 3.3m Repayment 15,000**	**3bd Price 4.3m Repayment 25,000**
1.	120,000	228,000	80,000	300,000
2.	240,000	456,000	360,000	600,000
3.	360,000	684,000	540,000	900,000
4.	480,000	912,000	720,000	1,200,000
5.	500,000	1,140,000	900,000	1,500,000
6.	620,000	1,368,000	1,080,000	1,800,000
7.	740,000	1,596,000	1,260,000	2,100,000
8.	960,000	1,824,000	1,440,000	2,400,000
9.	1,080,000	2,052,000	1,620,000	2,700,000
10.	1,200,000	2,280,000	1,800,000	3,000,000
11.	1,320,000	2,508,000	1,980,000	3,300,000
12.	1,440,000	2,736,000	2,160,000	3,600,000
13.	1,560,000	2,964,000	2,340,000	3,900,000
14.	1,680,000	X	2,520,000	4,200,000
15.	1,900,000	X	2,700,000	4,500,000
16.	X	X	2,880,000	X
17.	X	X	3,060,000	X
18.	X	X	3,240,000	X
19.	X	X	3,420,000	X
20.	X	X		X

Table 4.9 contained the year to year mortgage repayment of M.I. Wushishi and Talba housing estates.

Table 4.9 shows the year to year mortgage repayment of the occupants of the two estates under consideration. From the table, the mortgage in respect of the 2bedroom flats in M.I.

Wushishi housing estate will be redeemed at the end of the 15th year while that of the 3bedroom flats will be redeemed at the redeemed at the end of the 13th year. For Talba housing estate, the mortgage in respect of the 2bedroom flats will be redeemed in the 19th year while that of the 3bedroom flats will be redeemed in the 15th year.

Table 4.10 Summary of the mortgage redemption periods

S/no	Property Type	M.I. Wushishi Housing Estate	Talba Housing Estate
1	2Bedroom Flat	15years	19years
2	3Bedroom Flats	13years	15years

From Table 4.10, 3beroom flat in M.I. Wushishi has the least redemption period of 13years, followed by 2bedroom flat in M.I. Wushishi and 3bedroom flat in Talba housing estate each with 15years redemption period while the 2bedroom flat in Talba housing estate has the highest redemption period of 19years.

4.3.5 Analysis of housing affordability index of M.I. Wushishi and Talba housing estates.

4.3.5.1 Analysis of housing affordability of the occupants of M.I. Wushishi housing estate

The analysis to determine the housing affordability index for M.I. Wushishi housing estate using the Niger State Salary Structure and monthly mortgage repayment is presented in the table 4.11

Table 4.11: Housing affordability at M.I. Wushishi housing estate

Level	Monthly salary	Monthly Repayment		Affordability percentage (30%)	
		2 bedrooms	3bedroom	2 bedrooms	3 bedrooms
1	22,500	10,000	19,000	44%	84%
2	23,655	10,000	19,000	42%	80%
3	23,957	10,000	19,000	41%	79%
4	25,080	10,000	19,000	39%	76%
5	27,123	10,000	19,000	36%	70%
6	29,654	10,000	19,000	33%	64%
7	39,029	10,000	19,000	25%	49%
8	44,549	10,000	19,000	22%	43%
9	48,970	10,000	19,000	20%	39%
10	54,088	10,000	19,000	18%	35%
12	60,405	10,000	19,000	16%	31%
13	64,812	10,000	19,000	15%	29%

Source: Monthly salary was obtained from Niger State Salary Structure

(see appendix X) while data on monthly repayment was obtained from the estate department of Niger state housing corporation (NSHC)

Table 4.11 reveals the basic monthly salaries for public servant from level 1-13 who falls between low- and medium-income earners in the state. The maximum housing expenditure for households as canvassed by the International Labour Organization (ILO) is 1% -30%, which is considered as normal to allow households to meet other obligations for a healthy living. At M.I Wushishi housing estate only occupants who are in level 7 and above can comfortably afford two-bedroom apartment thereby spending 25% percent of their monthly income while the 3-bedroom flat is only affordable to grade level 13 as the monthly

repayment over the monthly salary produces 29%. It can therefore be seen that the housing developed is not affordable to the low-income earners that the housing is meant for. The study revealed that some civil servants' allottees to raise capital sum to build a house and they are also free from monthly repayment which they complained is too high in comparison with their monthly salary income while some leased out theirs for economic rent which helps them to cushion the effect of monthly deduction from their salaries and be making savings towards building another house, the outcome obtained above conforms with the positions of Richard *et al.,* 2015; Ankeli *et al.,* 2017; Jiya *et al.,* 2018; Nubor, 2020.

However, since a civil servant has 35years in service and Table 4.10 shows redemption periods of 13years, 15years and maximum of 19years, a consideration can be made for the extension of the redemption period to 25years and this will reduce the monthly repayment and improve affordability of the housing as shown in Table 4.12 as stated by Kolawole, 2009.

Table 4.12: Housing affordability at M.I. Wushishi housing estate at 25years redemption period

| Level | Monthly salary | Monthly Repayment | | Affordability percentage (30%) | |
		2 bedrooms	3bedroom	2 bedrooms %	3 bedrooms %
1	22,500	6,334	9,667	28.15	42.96
2	23,655	6,334	9,667	26.78	40.87
3	23,957	6,334	9,667	26.44	40.35
4	25,080	6,334	9,667	25.26	38.54
5	27,123	6,334	9,667	23.35	35.64
6	29,654	6,334	9,667	21.35	32.60
7	39,029	6,334	9,667	16.23	24.77
8	44,549	6,334	9,667	14.22	21.70
9	48,970	6,334	9,667	12.94	19.74
10	54,088	6,334	9,667	11.71	17.87
12	60,405	6,334	9,667	10.49	16.00
13	64,812	6334	9,667	9.77	14.92

Table 4.12 is based on redemption period of 25 years, it reduced the monthly repayment to N6,334 from N10,000 and it has also improved the affordability, it makes the 2bedroom affordable to Grade Level 1, step 1 from the previous Grade Level 7 and for 3bedroom flat, its monthly repayment got reduced to N9,667 from 19,000 and became affordable to Grade Level 7, Step 1 from the previous Grade Level 13, the extension of the repayment period which led to improvement in affordability as indicated in Table 4.12 agrees with the position of Kolawole, 2009.

4.3.5.2 Analysis of housing affordability index of occupants of Talba housing estate

The analysis of the housing affordability index for Talba housing estate using Niger State Salary Structure and monthly mortgage repayment is as presented below

Table 4.13: Housing affordability at Talba housing estate

Level	Monthly salary	Monthly Repayment		Affordability percentage (30%)	
		2Bedroom	3bedroom	2 bedrooms	3 bedrooms
1	22,500	15,000	25,000	66%	100%
2	23,655	15,000	25,000	63%	100%
3	23,957	15,000	25,000	62%	100%
4	25,080	15,000	25,000	59%	99%
5	27,123	15,000	25,000	55%	92%
6	29,654	15,000	25,000	50%	84%
7	39029	15,000	25,000	38%	64%
8	44549	15,000	25,000	33%	56%
9	48970	15,000	25,000	30%	51%
10	54088	15,000	25,000	27%	46%
12	60405	15,000	25,000	24%	41%
13	64812	15,000	25,000	23%	38%

Source: Field Survey 2019

Table 4.13 reveals the basic monthly salaries for public servant from level 1-13 who falls between low- and medium-income earners in the state. The maximum housing expenditure for households as canvassed by the International Labor Organization (ILO) is 1% -30%, which is considered as normal to allow households to meet other obligations for a healthy living. At Talba housing estate only occupants who are in level 9 and above that can comfortably afford two-bedroom apartment thereby spending 30% percent of their monthly income while the three bedrooms in Talba estate is not affordable to civil servants on grade levels 1-13. This also indicates that the housing being produced is not for the low-income earners, even the 3bedroom is not for medium-income earners.

Table 4.14: Housing affordability at Talba housing estate at 25years redemption period

Level	Monthly salary	Monthly Repayment		Affordability percentage (30%)	
		2Bedroom	3bedroom	2bedrooms %	3 bedrooms %
1	22,500	11,000	14,334	48.89	63.71
2	23,655	11,000	14,334	46.50	60.60
3	23,957	11,000	14,334	45.92	60.59
4	25,080	11,000	14,334	43.86	57.15
5	27,123	11,000	14,334	40.56	52.85
6	29,654	11,000	14,334	37.09	48.34
7	39029	11,000	14,334	28.18	36.73
8	44549	11,000	14,334	24.69	32.18
9	48970	11,000	14,334	22.46	29.27
10	54088	11,000	14,334	20.34	26.50
12	60405	11,000	14,334	18.21	23.73
13	64812	11,000	14,334	16.97	22.13

Table 4.14 is based on redemption period of 25 years, it reduced the monthly repayment to N11,000 from N15,000 and it has also improved the affordability, it makes the 2bedroom affordable to Grade Level 7, step 1 from the previous Grade Level 9 and for 3bedroom flat, its monthly repayment got reduced to N14,334 from N25,000 and it became affordable to Grade Level 9 Step 1 which was not hitherto affordable to Grade Level 13, the improvement in affordability being achieved by extending the repayment period, further consolidate the position of Kolawole, 2009 as earlier stated.

4.3.6 Testing of hypotheses and analysis of results.

H_o: There is no statistically significant relationship between income characteristics of the residents and their housing affordability.

Hi: There is a statistically significant relationship between income characteristics of the residents and their housing affordability.

Table 4.15: Correlation result of the survey on income characteristics of the residents and their housing affordability

Correlations		Income	Level of affordability
Income	Pearson Correlation	1	.875[*]
	Sig. (2-tailed)		.020
	N	490	490
Level of affordability	Pearson Correlation	.875[*]	1
	Sig. (2-tailed)	.020	
	N	490	490

**. Correlation is significant at the 0.05 level (2-tailed).

Pearson product moment correlation (PPMC) was used to test this hypothesis. Variable for this hypothesis was questions on income and level of affordability in study area. The correlation coefficient in table 4.26 shows that P = 0.020 (two tailed) < 0.05 the r - value is 0.875 the level of significant is at 0.02. This shows that H_1 which states that there is significant relationship between income characteristics of the residents and their housing affordability was accepted, it could be deduced from the result that the income of the respondents determines the level of housing affordability in the housing estates, however, the housing units are not affordable to the occupants.

4.4 Assessment of the Effectiveness of the Strategy adopted and the Performance of NSHC under the Strategy.

The evaluation of the PPP as housing strategy is on the data obtained from the office of PPP, NPPB and NSHC while the evaluation of NSHC is premised on the roles and functions of NSHC as contained in the Memorandum of Understanding (MOU) executed between the Niger state government and the developers (Prototype MOU is attached in the appendix.

4.4.1 Evaluation of adequacy of strategy, identification and evaluation of the roles of NSHC under built and transfer model of PPP development strategy adopted

Table 4.16 Identification of the functions of NSHC under PPP

S/No	Nature of Function	Activities performed	Remarks
1	Building Design	Development of design concepts that are considered to be suitable and obtaining approval from government for their adoption	The developer may in some instances and the agency will scrutinize and advise the government
2	Supervision of construction	Representation on site to ensure compliance to design, quantity and quality of materials, specifications	The technical/ professional staffs of the agency are deployed to the site for supervision of construction works by the developer
3	Monitoring	General coordination of development activities on site to ensure compliance to plan	The technical/professional staffs of the agency alongside with the office of PPP carry out monitoring of construction works
4	Evaluation	This is the work of reviewing construction activities on site stage by stage to ensure conformity to plan, it also involves site and office meetings with the developer to discuss challenges	The technical/ professional staffs carry out stage by stage evaluation and makes report to the management
5	Advice on payment	This is certification for payment being made for the release of fund to a developer for work done in accordance to the MOU.	The report of the evaluation guides the management of the agency in assenting to the request of the developer for payment
6	Action on defaulting Developer	This is taking appropriate action against defaulting developer in accordance to the memorandum of understanding	This is done in accordance to Memorandum of understanding
7	Allocation of housing Units	Allocation of the housing units according to laid down criteria	
8	Mortgage arrangement	This is facilitating mortgage arrangement between the an allottee and mortgage institution	
9	Record keeping and maintenance.	This is the maintenance of the records of all the allottees, records of transactions in respect of each housing unit, record of monthly deductions	
10	General management of the estate.	All management activities to ensure smooth running of housing estate	

Source: Niger State Housing Corporation (NSHC),2019

Table 4.16 shows the functions of NSHC under the implementation of PPP as housing strategy in Niger state. From the table, the functions of NSHC spans from conception of the project to construction and post construction activities. The officials of Niger state housing corporation identified the following functions as strategy for public housing delivery from 2007 -2015 under PPP. The functions identified are; conceptualization and production of building design, advice the government and developer on building design, representation on site to ensure compliance to design, quantity and quality of materials, specifications, general coordination of development activities on site to ensure compliance to plan, reviewing construction activities on site stage by stage to ensure conformity to plan, office and site meetings with developer, certification for payment for the release of fund to a developer for work done in accordance to the MOU, taking appropriate action against defaulting developer in accordance to the memorandum of understanding, allocation of the housing units according to laid down criteria, facilitating mortgage arrangement between the an allottee and mortgage institution, maintenance of the records of all the allottees, records of transactions in respect of each housing unit, record of monthly deductions and all management activities to ensure smooth running of housing estate.

4.4.2 Assessment of the performance of NSHC under PPP Between 2007-2015

Table 4.17: Performance of NSHC under PPP between 2007 – 2015

Performance of NSHC under PPP between 2007 – 2015	Mean	Rank
Issuance of certificate of payment for work not done	3.84	1
Partiality in dealing with the developers	3.05	2
Dealing with defaulting developers according to terms of MOU	3.00	3
Diligence, efficiency and honesty NSHC on site	2.47	4
Identification of challenges and solutions	2.42	5
Stage by stage evaluation of construction activities on site to ensure conformity to plan.	2.05	6
General coordination of development activities on site to ensure compliance to plan	2.05	6
Process of allocation of housing to beneficiaries	2.00	7
General maintenance of the housing estates	2.00	7
Representation on site to ensure compliance to design, quantity and quality of materials, specifications	2.00	7
Mortgage arrangement and management	1.95	8
Adequacy of technical and professional staff	1.32	9
Issuance of certificate of payment for work done	1.32	9
Advise the government on designs that are considered suitable	1.26	10
overall level of performance	2.10	

Source: author's field work, 2019

The results of analysis on performance of NSHC under PPP between 2007 – 2015 as indicated in Table 4.17 was arrived at through the use of Mean Score analysis. The results of analysis revealed that issuance of certificate of payment for work not done, partiality in dealing with the developers and dealing with defaulting developers according to terms of MOU (MS = 3.84, ranked 1st, MS= 3.05, ranked 2nd and   MS = 3.00, ranked 3rd) were rated as the most significant performance of NSHC under PPP between 2007 – 2015 respectively.

Conversely, the performance of NSHC under PPP was rated poor in respect of mortgage arrangement and management, adequacy of technical and professional staff, issuance of certificate of payment for work done and advise the government on designs that are considered suitable (MS 1.95, ranked 8th, MS 1.32. and 1.32 ranked 9th and MS = 1.26, ranked 10[tth] respectively. It was observed that the overall level of performance was good, as indicated by the computed average MS value of 2.10.

4.4.3 Assessment of the factors that affects the performance of NSHC under PPP between 2007-2015

Table 4.18: Factors influencing the performance of NSHC under the PPP between 2007 -2015

Factors influencing the performance of NSHC under the PPP between 2007 -	Mean	Rank
Conflicts of functions among PPP implementing stakeholders such as PPP office, Niger state public procurement board and Niger state housing corporation	4.00	1
Lack or poor implementation of PPP law and policies	3.79	2
Lack of training on PPP for staff and management of NSHC before implementation of policy	3.68	3
Poor tendering process	3.68	3
Poor packaging of PPP contract	2.57	4
Lack of prosecution of defaulting developers	1.95	5
Bribery and corruption	1.70	6
Release of funds by the government	1.36	7
Political god fatherism	1.36	7
Interference from government circle	1.26	8
Attitudes and behaviors of the developers	1.05	9
Compliance of developers to the terms of the MOU	1.05	9
Selection of financially weak developers	1.00	10
Overall level of factors influencing the performance	2.37	

Source: author's field work,2019

Table 4.18 above shows the results of analysis of factors influencing the performance of NSHC under the PPPP between 2007 -2015, the factors were analyzed through the use of Mean Score analysis. The results of analysis revealed that conflicts of functions among PPP implementing stakeholders such as PPP office, Niger state public procurement board and Niger state housing corporation, lack or poor implementation of PPP law and policies, and lack of training on PPP for staff and management of NSHC before implementation of policy and Poor tendering process (MS = 4.00, ranked 1st, MS = 3.79, ranked 2nd and   MS = 3.68 and 3.68, ranked 3rd) were the most significant factors that influence the performance of NSHC under the PPPP between 2007 -2015 respectively. Conversely, the least factors that influence the performance of NSHC under the PPP between 2007 -2015 are interference from government circle, attitudes and behaviors of the developers, compliance of developers to the terms of the MOU and selection of financially weak developers with MS 1.26, ranked 8th, MS 1.05. and 1.05ranked 9th and   MS = 1.00, ranked 10th respectively. It was observed that the general level of influence was very severe ranging between 4.00and 1.00) as indicated by the computed average MS value of 2.37, the outcome of the analysis as shown in Table 4.18 largely conforms with the outcome of the study by Mahmood and Anifowose, 2019.

4.4.4 Factors responsible for the inability of the allottees to enter into possession at Aliyu Makama housing estate and Bako Kotangora housing estate, Kotangora

Table 4.19: Factors responsible for the inability of the allottees to enter into possession

Factor Responsible for the inability of the allottees to enter into Possession	Aliyu Makama housing estate, Bida	Bako Kotangora housing estate, Kotangora
Lack of water	Yes (100%)	Yes (5.3%) No (94.7%)
Lack of estate roads	Yes (100%)	No (100%)
Lack of electricity	Yes (94.7%) No (5.3%)	Yes (5.3%) No (94.7%)
Refusal of the developer to handover	Yes (10.5%) No (89.5%)	Yes (100%)
Failure of government to fulfill contractual agreement	Yes (100%)	Yes (100%)
Failure of developer to fulfill contractual agreement	Yes (89.5%) No (10.5%)	Yes (94.7%) No (5.3%)
High cost of the housing units	Yes (5.3%) No (94.7%)	Yes (5.3%) No (94.7%)
Inability of the allottees to pay the initial 10% deposit	No (100%)	No (100%)
Lack of mortgage for the allottees	Yes (10.5%) No (89.5%)	Yes (89.5%) No (10.5%)
Non-completion of some of the housing units	Yes (94.7%) No (5.3%)	Yes (100%)
Dilapidations of the completed housing units	Yes (94.7%) No (5.3%)	Yes (100%)
Vandalization of the housing units	Yes (89.5%) No (10.5%)	Yes (100%)

Source: author's field work,2019

Table 4.19 shows the results of analysis factors responsible for the inability of the allottees to enter into possession was arrived at through the use of Mean Score Analysis. At Aliyu Makama Housing Estate, the results of analysis revealed that lack of water, lack of estate roads, lack of electricity, failure of government to fulfill contractual agreement, failure of developer to fulfill contractual agreement, non-completion of some of the housing units, dilapidations of the completed housing units and vandalization of the housing units are the most predominant factors responsible for the inability of the allottees to enter into possession,

while at Bako Kotangora Housing Estate, Kotangora, lack of estate roads, Refusal of the developer to handover, failure of government to fulfill contractual agreement, failure of developer to fulfill contractual agreement, inability of the allottees to pay the initial 10% deposit, lack of mortgage for the allottees, non-completion of some of the housing units, dilapidations of the completed housing units, and vandalization of the housing units are the most predominant factors responsible for the inability of the allottees to enter into possession.

4.4.5 Analysis of the Severity of the factors affecting the inability of allottees to take Possession

Table 4.20:   Severity of the Factors affecting the inability of the allottees to take possession

Factors	Mean	Std. Deviation
Lack of mortgage for the allottees	5.0000	1
Inability of the allottees to pay the initial 10% deposit	5.0000	1
1High cost of the housing units	4.5789	2
Lack of electricity	4.4737	3
Lack of estate roads	4.4737	3
Lack of water	4.4737	3
Non-completion of some of the housing units	1.9474	4
Vandalization of the housing units	1.7895	5
Dilapidations of the completed housing units	1.7895	5
Failure of developer to fulfill contractual agreement	1.0000	6
Failure of government to fulfill contractual agreement	1.0000	6
Refusal of the developer to handover	1.0000	6
Overall level of severity	**3.04**	

Source: author's field work,2019

The analysis of the severity of the factors affecting the inability of the allottees to take possession of the housing units was as shown, in Table 4.18, the result of the analysis

revealed that Lack of mortgage for the allottees, inability of the allottees to pay the initial 10% deposit, high cost of the housing units and lack of electricity, lack of estate roads, lack of water (MS = 5.00, 5.00 ranked 1st, MS = 4.57 , ranked 2nd and   MS = 4.47, 4.47, 4.47 ranked 3rd) respectively, are the least severe factors affecting the inability of the allottees to take possession of the housing units at Aliyu Makama housing estate. Conversely, failure of developer to fulfill contractual agreement, failure of government to fulfill contractual agreement and refusal of the developer to handover (MS 1.00, ranked 6th, respectively). Are the most severe factors affecting the inability of the allottees to take possession of the housing units at Bako Kotangora Housing Estate. It was observed that the general level of influence was severe, as indicated by the computed average MS value of 3.04.

4.4.6 Overall performance of niger state housing corporation (NSHC) in the development of Aliyu Makama housing estate and Bako Kotangora housing estates

Table 4.20: Analysis of Performance of Niger State Housing Corporation (NSHC) in Development Aliyu Makama and Bako Kotangora Housing Estates

Performance	Mean	Rank
Performance	3.00	1
Performance	3.00	1
Overall level of performance	3.00	

Source: author's field work, 2019

The result on the performance of Niger State Housing Corporation (NSHC) in development of Aliyu Makama Housing estate, Bida and Bako Kontagora Housing Estate, Kontagora was as shown in Table 4.20. The results of the analysis revealed that performance of Niger State Housing Corporation (NSHC) in development of the two estates was fair.

CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, RECOMMENDATION AND CONCLUSION

5.1 Summary of finding

1. A total number of 219,000 housing units was planned to be developed through PPP between 2007 to 2015, 2000 housing units were developed which represents 0.91% achievements.

2. On liveability, 43.1 % of the occupants at M.I Wushishi housing estate perceived that liveability was adequate while 56.9% perceived it was fairly adequate, 75.4% perceived that liveability was adequate in Talba housing estate, while 24.6% perceived it was fairly adequate to live in the estate. No respondents, on the average, perceived that liveability in both estates was inadequate.

3. With respect to the adequacy of the building facilities, 24.4% of the respondents perceived that the facilities in the at M. I Wushishi Housing Estate were adequate, 68.3% perceived they were fairly adequate while 7.3% perceived they were inadequate. At the Talba Housing Estate, 23.0% perceived that the facilities in the flats were adequate while 70.5% perceived they were fairly adequate and 6.6 % perceived they were inadequate. On the average, 23.7% perceived that the facilities in the flats were adequate, 69.4 % perceived they were fairly adequate and 6.9% perceived they were inadequate.

4. At M.I Wushishi housing estate, occupants who are on level 7 and above can comfortably afford two-bedroom apartment by spending 25% percent of their monthly income while the 3-bedroom flat is only affordable to civil servants on grade level 13 as the monthly repayment over the monthly salary produces 29%. At Talba housing estate only occupants who are on level 9 and above that can comfortably afford two-

bedroom apartment thereby spending 30% percent of their monthly income while the three bedrooms in Talba estate is not affordable to civil servants on grade levels 1-13

5.   The overall level of performance of NSHC was indicated to be good

6.   The analysis of the factors influencing the performance of NSHC shows that the general level of influence was very severe as indicated by the computed average MS value of 2.37.

7.   On factors hindering possession of the housing units, lack of water, lack of estate roads, lack of electricity, failure of government to fulfill contractual agreement, failure of developer to fulfill contractual agreement, non-completion of some of the housing units, dilapidations of the completed housing units and vandalization of the housing units are the most predominant factors responsible for the inability of the allottees to enter into possession at Aliyu Makama housing estate, while at Bako Kotangora housing estate, Kotangora, lack of estate roads, Refusal of the developer to handover, failure of government to fulfill contractual agreement, failure of developer to fulfill contractual agreement, inability of the allottees to pay the initial 10% deposit, lack of mortgage for the allottees, non-completion of some of the housing units, dilapidations of the completed housing units, and vandalization of the housing units are the most predominant factors responsible for the inability of the allottees to enter into possession.

8.   On the severity of the factors, the study revealed that, Lack of mortgage for the allottees, inability of the allottees to pay the initial 10% deposit, high cost of the housing units and lack of electricity, lack of estate roads, lack of water (MS = 5.00, 5.00 ranked 1st, MS = 4.57, ranked 2nd and   MS = 4.47, 4.47, 4.47 ranked 3rd) respectively, are the least severe factors affecting the inability of the allottees to take

possession of the housing units at Aliyu Makama housing estate. Conversely, failure of developer to fulfill contractual agreement, failure of government to fulfill contractual agreement and refusal of the developer to handover (MS 1.00, ranked 6th, respectively). Are the most severe factors affecting the inability of the allottees to take possession of the housing units at Bako Kotangora Housing Estate. It was observed that the general level of influence was severe, as indicated by the computed average MS value of 3.04.

9.The study revealed that the performance of NSHC in the development of Aliyu Makama and Bako Kotangora housing estates that has not been in occupation was fair.

5.2 Recommendation

Having painstakingly analyzed the data obtained from the field survey from the questionnaires and interviews, the study hereby proffers the following recommendations towards the enhancement of the effectiveness and efficiency PPP as housing strategy and the improvement of the performance NSHC under PPP, the study hereby makes the following recommendations.

1. To make the housing affordable the government extend the repayment period to 25years which lead to reduction in monthly repayment and it will make affordability index to be within the 30% affordability rate and greater number of low-income earners to have access to housing as shown in tables 4.12 and 4.14.

2. To improve the adequacy and livability of the housing, Government and NSHC should liaise with the tertiary institutions in the state such as Federal University of Technology, Minna, Federal Polytechnic, Bida and Niger State Polytechnic, Zungeru in conducting housing research in order to develop a realistic database and to update from time to time.

3. To improve the adequacy and effectiveness of PPP development strategy, government to eliminate political god fatherism that negatively impinges on the performance of the Corporation.

4. To further increase the adequacy of PPP development strategy, a comprehensive legal framework should be put in place through the ministry of justice, this will also eliminate the conflicts among the PPP coordinating agencies.

5. To further improve the performance and effectiveness of NSHC, Government should grant the Corporation more powers in dealing with defaulting developers by making amendments to the law that established the Corporation.

6. Government should revoke the contract of non-performing developers especially the developers handling Aliyu Makama housing estate, Bida and Bako Kotangora housing estate, Kotangora and sell the completed but vandalized housing units to the allottees on the basis of rebus-sic-stantibus as well as others at various stages of construction. Furthermore, the government should constitute a committee of professional of Estate Surveyors and Valuers, Quantity Surveyors and engineers to prepare a comprehensive report on the cost implications of the uncompleted Estates and mobilize NSHC for their completion by direct labour.

7. For PPP to be implemented successfully, government should allow NSHC to manage the entire process professionally.

5.3 Suggestion for further research

This study has brought to the fore, the lapses, challenges as well as the failure of the implementation of PPP as housing delivery strategy in Niger State by identifying factors that are responsible, the factors affecting the performance of NSHC and the severity of the factors. and other contributing factors as well, this is attributable to lack of an appropriate

theoretical framework and model amongst others.

This study hereby proposes a study into development of a suitable PPP stakeholder's relationship model upon which a revised and/or PPP law could be based, this, the study believed will increase the adequacy and effectiveness of PPP as housing strategy as well as bring about improvement in the performance of NSHC as public housing development agency in Niger State.

5.4   Conclusion

The study reveals a dismal performance of public private partnership as housing strategy with the achievement of 0.91%, a fair performance by NSHC, factors influencing the performance of the Corporation and the severity of the factors. Having identified and analyzed the factors responsible for the inadequacy and ineffectiveness of PPP as housing strategy, the factors influencing the performance of NSHC and their severity and recommendations put forward by the study, this study believes that the implementation of PPP in Niger state will be able to achieve the successful results as stated by UN-HABITAT, 2011.

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FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA
SCHOOL OF POST GRADUATE STUDIES
DEPARTMENT OF ESTATE MANAGEMENT & VALUATION

Dear Sir/Madam,

My names are Samuel Jonathan, a master's student of the above-named institution currently gathering information towards the thesis "**Evaluation of the Adequacy of Public Private Partnership Development Strategy Adopted by Niger State Housing Corporation".** Your responses will be of utmost benefit to the success of this work and shall be treated with confidentiality.

Thank you.

QUESTIONAIRE FOR THE PRINCIPAL OFFICERS OF NIGER STATE HOUSING CORPORATION(NSHC), NIGER STATE PUBLIC PROCUREMENT BOARD (NSPPB) AND PPP OFFICE.

PART A

1.Name of Organization……………………………………….

2. Position…………………………………………………………….

3. How long have you been in service…………………………………

4. Sex…………………………………………………………………...

PART B

Q1. What are the functions of Niger state housing corporation under PPP as strategy for public housing delivery from 2007 -2015?

NB

Kindly thick as they apply

S/NO	FUNCTIONS	TICK
1	Conceptualization and production of building design	
2	Advice the government and developer on building design	
3	Representation on site to ensure compliance to design, quantity and quality of materials, specifications	
4	General coordination of development activities on site to ensure compliance to plan	
5	Reviewing construction activities on site stage by stage to ensure conformity to plan	
6	Office and site meetings with developer	
7	Certification for payment for the release of fund to a developer for work done in accordance to the MOU.	
8	Taking appropriate action against defaulting developer in accordance to the memorandum of understanding	
9	Allocation of the housing units according to laid down criteria	
10	Facilitating mortgage arrangement between the an allottee and	

	mortgage institution	
11	Maintenance of the records of all the allottees, records of transactions in respect of each housing unit, record of monthly deductions	
12	All management activities to ensure smooth running of housing estate	

Q2. Assessment of the Performance of NSHC under PPP between 2007 – 2015

Kindly assess the performance of NSHC under PPP between 2007-2015 using scale 1-5 as follows: 1=Excellent, 2= Good, 3=Fair, 4=Poor, 5=Very poor

S/NO	ACTIVITIES UNDERTAKEN	1	2	3	4	5
1	Advise the government on designs that are considered suitable					
2	Representation on site to ensure compliance to design, quantity and quality of materials, specifications					
3	General coordination of development activities on site to ensure compliance to plan					
4	Stage by stage evaluation of construction activities on site to ensure conformity to plan.					
5	Identification of challenges and solutions					
6	Issuance of certificate of payment for work not done					
7	Issuance of certificate of payment for work done					
8	Dealing with defaulting developers according to terms of MOU					
9	Diligence, efficiency and honesty NSHC on site					
10	Adequacy of technical and professional staff					
11	Partiality in dealing with the developers					
12	Process of allocation of housing to beneficiaries					
13	Mortgage arrangement and management					
14	General maintenance of the housing estates					

Q3. Kindly rate how the following factors influenced the performance of NSHC under the PPPP between 2007 -2015 using scale 1-5 as indicated: 1=Very, very severe, 2= Very Severe, 3= Severe, 4=Fairly severe, 5= Not severe

S/NO	FACTORS	1	2	3	4	5

1	Compliance of developers to the terms of the MOU					
2	Selection of financially weak developers					
3	Attitudes and behaviors of the developers					
4	Interference from government circle					
5	Political god fatherism					
6	Bribery and corruption					
7	Poor tendering process					
8	Lack of prosecution of defaulting developers					
9	Lack or poor implementation of PPP law and policies					
10	Release of funds by the government					
11	Poor packaging of PPP contract					
12	Lack of training on PPP for staff and management of NSHC before implementation of policy					
13	Conflicts of functions among PPP implementing stakeholders such as PPP office, Niger state public procurement board and Niger state housing corporation					

Q4. Aliyu Makama housing estate, Bida and Bako Kontagora housing estate, Kontagora had been allocated for the units that were completed but had remained unoccupied since 2010, kindly tick the factors from the list provided below responsible for the inability of the allottees to enter into possession.

NB

Kindly tick as many as it applies

FACTORS	Aliyu Makama Housing Estate	Bako Kotangora Housing Estate, Kotangora
Lack of water		
Lack of estate roads		
Lack of electricity		
Refusal of the developer to handover		
Failure of government to fulfill contractual agreement		
Failure of developer to fulfill contractual agreement		
High cost of the housing units		
Inability of the allottees to pay the initial 10% deposit		
Lack of mortgage for the allottees		
Non-completion of some of the housing units		

Dilapidations of the completed housing units		
Vandalization of the housing units		

Q5. Kindly rate how these factors affects the inability of the allottes to take possession of the housing units using scale 1-5: 1= Very, very severe, 2=Very severe, 3= severe, 4= fairly severe, 5 = Not severe

Aliyu Makama Housing Estate

S/NO		1	2	3	4	5
1	Lack of water					
2	Lack of estate roads					
3	Lack of electricity					
4	Refusal of the developer to handover					
5	Failure of government to fulfill contractual agreement					
6	Failure of developer to fulfill contractual agreement					
7	High cost of the housing units					
9	Inability of the allottees to pay the initial 10% deposit					
10	Non-completion of some of the housing units					
11	Dilapidations of completed housing units					
12	Vandalization of completed housing units					

Bako Kotangora Housing Estate

S/NO		1	2	3	4	5
1	Lack of water					
2	Lack of estate roads					
3	Lack of electricity					
4	Refusal of the developer to handover					
5	Failure of government to fulfill contractual agreement					
6	Failure of developer to fulfill contractual agreement					
7	High cost of the housing units					
8	Inability of the allottees to pay the initial 10% deposit					
9	Lack of mortgage for the allottees					
10	Non-completion of some of the housing units					
11	Dilapidations of completed housing units					
12	Vandalization of completed housing units					

Q6. Kindly rate the performance of Niger State Housing Corporation (NSHC) in development of Aliyu Makama Housing estate, Bida and Bako Kontagora Housing Estate, Kontagora

S/NO	HOUSING ESTATE	EXCELLENT	GOOD	FAIR	POOR	VERY POOR
1	Aliyu Makama Housing Estate					
2	Bako Kontagora Housing Estate					

Q7. Kindly the provide the following information in respect of Aliyu Makama housing estate, bida and Bako Kontagora housing estate, Kontagora

S/No	Description of item	Aliyu Makama Housing Estate, Bida	Bako Kontagora Housing Estate, Kontagora
1	No of units planned		
2	No of units fully completed		
3	No of units roofed with doors, windows and ceiling		
4	No units roofed without doors, windows and ceiling		
5	No of units at lintel level		
7	No of units at foundation level		
8	No of units not developed		
9	Construction of estate roads		
10	Availability of electricity		
11	Availability of water		
12	No of housing units allotted		

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Dear Sir/Madam

My names are Samuel Jonathan a master's student of the above-named institution currently gathering information towards the Thesis **"Evaluation of the Adequacy of Public Private Partnership Development Strategy Adopted by Niger State Housing Corporation"**. Your responses will be of utmost benefit to the success of this work and it shall be treated with confidentiality.

Thank You.

Questionnaire for occupiers of public housing

1. Name (optional)

2. Sex   (a) Male { }   (b) Female { }

3. Marital Status

    a. Married { }   b. Single { }   c. Single Parent { }

4. Type of unit occupied

    a. 1- bdr { }   b. 2- bdr { }   c. 3- bdr { }   d. 4- bdr { }

5. Numbers of occupants

    a. 1 – 2 { }   b. 3 – 4 { }   c. 5 – 6 { }   d. 7 – 8 { }   e. 8 and above { }

6. Occupant

    a. civil servant { } b. non - civil servant { }

7. How long have you been in occupation

    a. 1 – 2years {   } b. 3 – 4years {   }   c. 5 – 6years {   }   d. 7 – 8years {   }

    e. 9years and above {   }

8. Are you the owner of the property?

Yes { }   No { }

9. If you are the owner, how did you secure the allocation of the property?

a. Balloting { }   b. seniority at work { }   c. merit { }   d. ability to afford the

down payment { }   e. provision of collateral { }

10. What is the ration of your monthly repayment as compared to your monthly income?

a. 10% - 15% { } b. 16% - 20% { }   c. 21% - 25% { }   d. 26% - 30% { }

   e. 31% and above { }

11. Kindly assess your housing by ticking the appropriate answer for the following.

S/N	HOUSING ATTRIBUTE	VALID ADEQUATE	ADEQUATE	FAIRLY ADEQUATE	INADEQUATE	VERY INADEQUATE
A.	Location					
B.	Security					
C.	Accessibility to					
	i. Employment s					
	ii. Health care					
	iii. Children school					
	iv. Place of ownership					
	v. Market/shopping					
D.	infrastructure					
	vi. Water					
E.	vii. Road					
	viii. Electricity					
	ix. Telecom					
	x. Waste management					
F.	Housing unit					
	xi. Size of the					
	xii. Living room					
	xiii. Size of the bedroom					
	xiv. No of bedroom					

	xv. Size of kitchen					
	xvi. No of toilet/bathroom					
	xvii. Size of toilet/bedroom					
	xviii. Size of courtyard					
	xix. Floor finishing					
	xx. Wall finishing					
	xxi. Roof structure					
	xxii. Structure stability					
	xxiii. Window type and strength					
	xxiv. Door type and strength					
	xxv. Ceiling type and strength					
G.	Public facilities					
	xxvi. Medical					
	xxvii. Commercial					
	xxviii. Sports					
	xxix. Education					
	xxx. Waste management					

12. Other comments that could enhance Public Housing Development in Niger State

_____

_____

_____

Thank You.

APPENDIX III

INTERVIEW QUESTIONS FOR THE DIRCTOR GENERAL, PPP OFFICE, GOVERNOR'S OFFICE

1. Which year was the office established?

2. Was there any law that backed up the office? If yes, was the law gazetted?

3. What were the functions of the office in the implementation of PPP as housing delivery?

4. What are the linkages between the PPP office, Niger State Public Procurement Board and Niger State Housing Corporation?

5. In implementing the PPP for housing delivery, an MOU is being executed between the state government and a contractor, what are the functions of the following:

   a) PPP Office

   b) Niger state Housing Corporation

   c) Niger State Public Procurement Board

6. Kindly assess the performance of Niger State Housing Corporation (NSHC) under the implementation of PPP as public housing delivery strategy in the state?

7. How many housing units were planned to be constructed between 2007 and 2015 and how many units were constructed?

8. What are the challenges that were encountered in the implementation of PPP for the construction of the housing estates especially Aliyu Makama Housing Estate, Bida and Bako Kontagora Housing Estate, Kontagora?

9. What can be done to mitigate these challenges?

APPENDIX IV

INTERVIEW QUESTIONS FOR THE GENERAL MANAGER, NIGER STATE HOUSING CORPORATION.

1. PPP office was established to drive the housing delivery in the state between 2007 and 2015, in what ways does this affects the operations and performance of your organization as the public housing delivery agency in the state?

2. In the implementation of the PPP for housing delivery, an MOU is been executed between the state government and the contractor, what are roles or functions of the Corporation as stated in the MOU?

3. Apart from the MOU, was there PPP regulatory law?

4. Kindly assess the performance of your Corporation under the implementation of the PPP as housing strategy?

5. What are the challenges encountered by your Corporation in the implementation of PPP as housing strategy in the state?

6. What can be done to mitigate these challenges?

7. What can be done to make your Corporation perform professionally and efficiently under PPP and to make PPP more effective as a strategy for public housing delivery?

APPENDIX V

INTERVIEW REPORT WITH THE DIRECTOR OF ESTATES, NIGER STATE HOUSING CORPORATION.

Question: What was the strategy that was engaged for the construction of Aliyu Makama Estate, Bida and Bako Kotangora Housing Estate, Kotangora?

Answer: The name of the strategy is public private partnership (PPP)

Question: Can you outline the function of the Gov,t, developer and NSHC in the implementation of the strategy.

Government:

➢ To provide land for the project

➢ To pay compensation for the land owners

➢ To issue C of O in respect of the land in the name of the developer with a provision for revocation on the branch of agreement by the developer.

➢ To provide a list of off-takers to the developer

➢ To acquire 30% of the development on completion should the off-takers fail to perform

➢ To provide for the cost of infrastructure such as road, electricity, water, security (perimeter fence wall and security post), hospital, school, commercial.

 The cost of the infrastructure is to be released to the developer for execution.

Developer:

● To build the housing units to specification and completion within the approachable time frame.

● To maintain the cost of the units as agreed

● To mobilize finance for the development of the housing

● Developer to sell the 70% through NSHC

Other provision:

Where there is a discontinuation of development process either by the developer or the Government, a valuation of the development (rebus-sic-stantibus) shall be undertaken by either or both parties for the purpose of refund to the developer.

Niger State Housing Corporation

- To act as supervisor agency for the government

- To ensure adherence to design, and other specification as contained in the building drawings.

- To oversee the escrow account into which allocates wall bay initial installment of 10% and purchase price.

- To ensure that both offer letter and allocation letters are given to beneficiaries

- To act as channel through which government makes money available to the developer

- To see to the management and maintenance of the estate after the handing over by the developer.

Question:

PPP was used to deliver M.I. Wushishi housing estate and Talba housing estate both consisting of 500 housing units each and in Minna.

Why is it that the same PPP strategy failed to deliver the Aliyu Makama estate, Bida and Bako Kontagora estate, Kotangora that were 250 housing units each?

Answer:

The PPP did not succeed even for M.I. Wushishi and Talba estate, as implied by the general public.

For M.I. Wushishi

1. That the developer failed to deliver according to the terms of the contract.

2. The developer lacked the financial capacity as claimed

3. The government took over the project to avoid failure being the first housing project by Governor Babangida Aliyu.

4. The project was more of government financing rather than PPP.

Talba Housing Estate:

1. Developer achieved about 60% performance

2. Government intervened through NSHC to complete the 40% of the developer obligation

3. The prompt intervention of the state government in both Estates did not allow for the abandonment of the development process and did not also allow for the challenge to be noticed.

Aliyu Makam Housing estate:

1. Failure of the developer to deliver as per the terms of the contract

2. Developer lacked financial capacity

3. Developer expected the fund for infrastructure to be released which he could divert to the development of the structures but it was not released by the government

4. The developer abandoned the development process alleging that government was owing them

Bako kotangora housing estate:

1. The situation was said to be a replica of that of Bida.

Question: What are the problems and challenges of the operation of PPP as a strategy in Niger State?

The problems as put forward by the respondents are:

Developer:

    i.   Lack of financial capacity by the developers

   ii.   Preparation of fake profile

  iii.   Lack of technical capacity (lack of modern equipment and requisites profile scandals)

  iv.   Unrealistic expectations of the developer from the state government. In this instance, they are over dependent on the infrastructure fund to be released by the government to them for them to use to fulfill their own contractual obligation

   v.   Reliance on political god fatherism.

  vi.   Using the C of O raised in their names as collateral to raise fund for other projects elsewhere.

Niger state government:

1. Politicization of the entire process

2. Lack of demand for banks bond/guarantee from the developer to indicate their capacity to execute the project.

3. Not conducting due diligence on the developer before the award of contract.

4. Lack of stringent enforcement of the terms of the contract i.e. failure on the part of the government to prosecute defaulting developers.

5. Making the housing Corporation a "mere" and "powerless" supervisory agency.

Question: What is the way forward?

    i.   Government to let go of the developers. This can be done by carrying out a valuation to determine the cost of the extent of work undertaken by them and deduct any liability of the developer and pay them off.

   ii.   The government should direct NHSC to issue a letter of allocation to the beneficiaries at a 'reconsidered' value.

  iii.   The 'reconsidered' value should take cognizance of the following:

a. Current state and condition of the developers

b. The value should take cognizance of the state and condition of the properties as identify in 'a' above. This means that the properties will have different values.

c. Based on item 'b' above, the allocatees should be made to proceed to complete the properties based on the design at their own cost.

iv. Government to provide infrastructure such as road, electricity, water, security, medical, school e.t.c through Niger state housing Corporation.

v. If the government would want to complete the development before allocation, then it should be done through the housing Corporation on direct labor.

Question: What is your assessment of the engagement of PPP as a strategy for housing delivery in Niger State and what other alternatives would you suggest?

Answer: PPP as a housing delivery strategy is a failure so far.

For all the housing estates initiated and embarked upon through the strategy from 1999-2019, it has never yielded the desired result.

The challenges of the strategy on part of government and developers should be critically examined and appropriate measures be put in place to address them.

Question: What can be done to improve public housing delivery in Niger State?

Answer: (i) Restore the full autonomy of the housing Corporation as it is in the law that established it.

(b) The general manager of the Housing Corporation should be answerable directly to the governor and not a permanent secretary or commissioner & so as to remove delays, un-necessary politicking and bureaucracy.

(c) About 20%-30% of the annual budget of the state should be dedicated to housing.

(d) The government to make housing policy for the state which will be guidelines for operators in the housing sector.

(e) Government to resuscitate the dead state mortgage bank and recapitalize it accordingly.

Peculiar situation at Aliyu Makama housing estate, Bida and Bako Kotangora housing estate, Kotangora.

Aliyu Makama Estate, Bida

Question: How many housing units are planned for development?

Answer: 150 units of 2 bedroom and 100 units of 3 bedrooms totaling 250 housing units

Question: When was the contract awarded?

Answer: 2009.

Question: What is the current state of the development?

Answer: For the 2 bedrooms as at 2014.

   iii. 40 units fully completed

   iv. 60 units plastered and roofed

   v. 50 units at various levels of construction.

  For 3 bedrooms

    1. 32 units were plastered and roofed

    2. 18 units roofed but not plastered

    3. 50 units at various levels of construction

NB

The housing units had gone through various degrees of deterioration as a result of vandalization and weather conditions.

Question: Has infrastructure been provided for the estate?

Answer: Infrastructure such as road, water, and electricity, are yet to be provided,the springing of electricity lines started but was abandoned.

Only perimeters fence walls were constructed.

Question: Has housing units been allocated?

Answer: Letters of offer has been prepared to be given to applicants following the payment of the mandatory 10%, but they are yet to be given to them.

Question: What was the value of the property upon which the 10% was premised?

As at 2014, the value was

Type of units	Value (₦)	10%
2 bedrooms	4,000,000	N400,000
3 bedrooms	4,500,000	N450,000

Question: Has the 10% been paid by the applicants?

Answer: Yes

Question: To whom?

Answer: To the account of NHSC called escrow account.

Question: With the current state of dilapidations, does the values and the 10% paid still holds?

Answer: No

Question: What is it to be done?

Answer: There is a proposal to re-value the properties as they are, then the 10% been paid will be considered as part of the payment of the newly assessed value and the balance will be deducted from salaries

Example:

Type	Value	10%	Current value	Balance
2 bedrooms	4,000,000	400,000	2,500,000	2,100,000 i.e. (2,500,000-400,000)

The sum of N2, 100,000 will be deducted from salaries over years

Question: What happens to the outstanding works?

Answer: Letter of allocation will be issued to the applicants with the condition that the properties will be completed by them on their own but specified design.

Question: What is the position of the developer?

Answer: The government has started the process of paying off the developer.

Question: What will happen to the provision of infrastructure?

Answer: The government will take over the provision of infrastructure

Question: How soon will it be to continue and complete development process?

Answer: I don't know.

Presence of the developer on site

i.   The developer still has his presence on site with one of the units been used as site office.

ii.   We also gathered that the developer collected monies from some applicants and issue then letters of allocation

iii.   The housing Corporation office in charge confirmed it and declared it illegal and that the developer has been mandated to withdraw same.