

**AN EVALUATION OF HOUSING AFFORDABILITY FOR NIGER STATE  
CIVIL SERVANTS UNDER PUBLIC-PRIVATE PARTNERSHIP (PPP)  
HOUSING DEVELOPMENT**

**BY**

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P13EVBD8103**

**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,  
AHMADU BELLO UNIVERSITY, ZARIA.**

**IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD  
OF A  
MASTER DEGREE IN CONSTRUCTION MANAGEMENT.**

**DEPARTMENT OF BUILDING,  
FACULTY OF ENVIRONMENTAL DESIGN  
AHMADU BELLO UNIVERSITY, ZARIA  
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**JUNE, 2015**

## **DECLARATION**

I declare that the work in this thesis entitled An Evaluation of Housing Affordability for Niger State Civil Servants under Public-Private Partnership (PPP) Housing development has been carried out by me in the Department of Building. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree at this or any other Institution.

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Date

## CERTIFICATION

This thesis entitled AN EVALUATION OF HOUSING AFFORDABILITY FOR NIGER STATE CIVIL SERVANTS UNDER PUBLIC - PRIVATE PARTNERSHIP (PPP) HOUSING DEVELOPMENT by MADINAT SHITU ABDULLAHI meets the regulations governing the award of the degree of MSc. of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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## **DEDICATION**

This work is dedicated to my grandmother Hajiya Ramatu Hassan for her support and prayer during the time of study.

## **ACKNOWLEDGEMENTS**

All praise is to the Almighty Allah for giving me this opportunity to attain this achievement in my life. My sincere gratitude goes to my supervisors Prof.I.Mbamali and Dr. D. Kado, whose constant contributions, consideration, encouragement and tolerance have made the successful completion of this work possible. May the Almighty Allah reward you abundantly.

My appreciation also goes the former Head of Department Prof. Bala .K for his contributions and encouragement. My sincere appreciation to Dr.G.H.Musa-Haddary of Quantity Surveying Department for his great contribution and tireless effort on this work and also Prof.Ahmed.D.Ibrahim of Quantity Surveying Department for his contributions. Dr.D. Abdulsalam and other members of academic and non-academic staff of the Department of Building who are numerous to mention thank you all for your support and contributions during the entire period of this work.

I am deeply grateful to the family of Mr A.A.Oke .Department of Quantity Surveying, Federal University of Technology Minna for his sacrifice and support,Mal. Ishaq Yusuf for his tireless effort.I wish to express my sincere appreciation to my General Manager, QS Usman Baba Adamu of Niger State Housing Corporation, Minna, my Professional colleagues and other member of staff who in one way or the order have contributed to the success of my research study. My gratitude goes to my husband Mal . Abdullahi Mohammed for his valuable contributions, support and understanding, my children for their consideration and also my parents Alhaji and Hajiya Mohammed Shitu for your support, love and concern accompanied with your encouragement and tireless prayers, has made the work a complete success.

My sincere appreciation also to my Siblings and friends; Alhaji and Hajiya Kaltum Rufai, Dr and Haj.Fatima. G.Mohammed.May the Almighty Allah reward your efforts.

I will not forget to show my gratitude to Hajiya Hadiza Dahiru for her hospitality and kind gesture and also to all my post graduate course mates for their contributions.

Finally, appreciation to Aunty M.C.Veronica for your painstaking and understanding throughout editing and printing of this work.

## ABSTRACT

Niger state government achievement in Public housing delivery for its citizen since its creation in 1976 has been very minimal—with just 3,000 houses provided for a population of 3,954,772 so far. Changing its delivery strategy from being the sole provider of housing, the government in 2007 opted for a new strategy of Public-Private Partnership (PPP) which was to provide **affordable** housing for all workers under a private sector driven mechanism. Since 2007, some houses have so far been allocated to the planned beneficiaries—mostly state civil servants. However, the challenge has been to ascertain how affordable the provided houses were to the state civil servants who are earning various salaries within the state's wage system. The study conducted affordability analysis of the housing products for the various levels of civil servants allottees. Data used for the analysis were sourced from the project record files, government approved wage table and a questionnaire survey. The purposive sampling technique was employed in administering the questionnaire to a sample of 187 beneficiaries. The analysis revealed that applying the standard housing affordability yardstick of not more than 30 percent of gross household income, only civil servant allottees from level 10 to 16 can afford the 2-bedroom housing at a total cost of ₦1.9M and a monthly repayment amount of ₦10,000.00 while 3-bedroom houses were not affordable to any of the allottees at a total cost of ₦2.9M and a monthly repayment amount of ₦19,000.00. This probably explains why 44 percent were partially satisfied while 68 percent respondents stated that their dissatisfaction was due to the monthly repayment amount. The study by way of sensitivity analysis was able to recommend that if the cost of 2-bedroom house is reduced to ₦1.2M and mortgage repayment interest rate reduced to 3 percent for an extended period of 25 years every workers from level 1 to 16 could afford the houses in such modified scheme.

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Housing is an integral element of a nation's economy and its backward and forward linkages with other parts of the economy closely bond people's needs, demands and social processes. These linkages allow housing to act as an important engine for sustainable development and poverty reduction in both society and the economy, and without a functioning housing sector, urban centers cannot be established or developed. A functioning housing sector offers appropriate, affordable housing and sustainable patterns of urbanization which are critical for the future of our ever-urbanizing planet (Arias, 1993).

Public housing delivery for civil servants in Niger State started after the creation of the State in 1976 when some government quarters were constructed under the supervision of Niger State Ministry of Works, Transport and Housing. Later, Niger State Housing Corporation was created in 1979 for housing delivery in the state. However, between 1976 and 2007 less than 3,000 houses were developed by the public sector. Niger State Evolving Strategy for Sustainable Housing (NSESSH, 2007).

In order to improve on this, the government of Niger State in 2007 embraced the Public Private Partnership (PPP) as an alternative strategy for her housing delivery. This was a position response to the 2<sup>nd</sup> United Nation (UN) Conference on Human settlement (HABITAT II) in Istanbul, in June, 1996 which advocated the effective and affordable mass housing delivery through Public-Private Partnership (NSESSH, 2007).

Public- Private Partnership (PPP) involves a contract between a public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project. PPP is the partnership of two or more actors at least one of which is public and another from the private business sector. The Niger State administration since 2007 commenced Public-Private Partnership implementation of her housing scheme to the state civil servants with much emphasis on affordability. Niger State Gateway to Land and Housing (NSG&LH, 2007).

According to Aribigbola (2006) housing affordability has been widely recognized as an essential issue in creating sustainable built environment especially in the context of developing world cities. Mbamali and Obiekwe (2001) described affordable housing for a particular income group as the range of houses for which the total monthly repayment costs fall within the monthly repayment capability of the average household in that income group. For AHURI (2004) the rationale for housing assistance is to improve housing affordability for those receiving the assistance. Kolawole *et al* (1998) stressed that, for housing to be affordable for certain level of households, there should be provision for subsidy.

In Nigeria, the national housing policy does not want any Nigerian to spend more than 30 percent of their income on housing expenditure (Aribigbola, 2006). In addition, the 1992 National Housing Strategy defined affordable housing as any housing costing less than 30% of income, though some level of workers have over 30% of their salary being deducted for the repayment of the houses allocated to them. This study sets out to ascertain if the civil servants' allottees of the Niger State housing scheme have capacity to afford the repayment schedule.

## **1.2 Statement of the Research Problem.**

Mabogunje (2004) stressed that the cost of providing a unit of housing remains out of the reach of the poor because of some other factors that are militating against affordable housing. Thus, brings in the financial dimension - the question of the affordability of housing. The challenge becomes not only to provide the houses but to make the houses affordable to the average Nigerian worker (Onyike, 2007).

However, the Niger State government Mohammed Inuwa (M.I)Wushishi Housing Scheme was meant to provide her citizen (especially State Civil Servants) with affordable housing; how affordable are these houses to the beneficiaries are yet to be ascertained.

## **1.3 Significance of the Study**

The study is necessary in order to facilitate the development of large scale housing in Niger state by enabling civil servants with low and medium income to own houses on owner-occupier basis (Niger State Gateway to Land and Housing, 2007). This research work analyses the repayment burdens borne by public sector workers, irrespective of their cadre (whether junior or senior).

It is expected that the findings of the study would inform incumbent and future state governments on how best to maximize the benefits of involving private housing developers in housing delivery, through ensuring that such houses reach as many civil servants as possible and at affordable repayment plans.

## **1.4 Aim and Objectives**

### **1.4.1 Aim**

The aim of the study is to evaluate the existing repayment schedule for allottees of the PPP housing in Niger State relative to their income, with a view for enhancing the affordability.

### **1.4.2 Objectives**

The objectives of the study are to:

1. Review past and current efforts of Federal and the Niger State governments in housing development, especially Public –Private Partnerships (PPP).
2. establish the profile of the Niger State Public Sector beneficiaries of the PPP housing development (M.I.Wushishi Housing Estate).
3. evaluate the affordability of the allocated houses to the allottees, under the housing scheme and the existing repayment plan.
4. suggest an improved repayment plan for enhancing affordability of the housing scheme.

## **1.5 Scope and Limitations**

### **1.5.1 Scope**

The study covered:

Houses within the Mohammed Inuwa (M.I) Wushishi Housing Estate and Civil Servants of Niger State that were allocated houses under the Estate in 2009, the existing formal income based on Consolidated Public Salary Scale (CONPSS) of Public Sector Workers in Niger State as at the time of the study (2011) irrespective of changes in economic circumstances of workers and applicable to all civil servants. Furthermore,

the study viewed the housing cost as amount that would be repaid over a stated period of time, other charges over the life span of the house were not considered.

### **1.5.2 Limitations**

The study discovered that only M.I.Wushishi Housing Estate was completed and allocated under PPP scheme, hence, the data for the study was obtained only from the estates. As a result, other estates not completed could not be covered by the study.

In addition, only formal salary income for the allottees was considered as source of repayment in the study, other source of income (informal income) was discovered irregular and thus could not be used herein.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Housing Development in Nigeria**

##### **2.1.1 Concept of housing**

Housing has been universally accepted as the second most important essential human need, after food. Housing in its entire ramification is more than shelter since it embraces all the social services and utilities that go to make a community or neighbourhood a livable environment (National Housing Policy, 2006).

Chatterjee (1981) described housing as a complex product that is crucial for National development in terms of both economy and welfare. Housing provides a combination of services, the first and most basic of which is the shelter offered by the dwelling space. Second, in conjunction with the services of land and utilities, the dwelling provides a variety of environmental services: water supply, sewage and solid waste disposal, energy use, and so on. Furthermore, housing is mentioned as a major component of household consumption.

The proportion of expenditures devoted to housing is directly related to income level, and inversely to the price of housing. Investments in housing generate demand for labour directly in the construction industry and indirectly in related industries. Direct effects stem from work opportunities in construction, and provision of infrastructure such as water supply, roads, and power. Indirect effects derived from the impact of other industries such as cement, steel supply to the construction industry (Chatterjee, 1981).

Sanusi (2003) identified housing as a very important durable consumer item, which impacts positively on productivity, as decent housing significantly increases workers' health and well being, and consequently, growth and it is one of the indices for measuring the standard of living of people across societies.

Peterside (2003) also stated that every inhabitant truly deserves a decent and affordable housing, acquiring a home is arguably the largest investment most families would make in their lifetime. National Housing Policy (2006) defined housing as the process of providing functional shelter in a proper setting in a neighborhood supported by sustainable maintenance of the built environment for the day to-day living and activities of individuals and families within the community.

Jinadu (2007) stressed that the totality of ideas and views expressed what housing entails in two clear dimensions. First; housing is seen as an economic process and product. Second as a social symbol .Turner in Jinadu (2007) describes housing as the economic process as the ways and means by which housing goods and services are produced through the interactive construction processes of land acquisition, housing finance mobilization, material assemblage and actual construction.

As an economic product, housing represents a commodity traded in the housing market. It is also seen as a product of investment and means of income generation. As a social symbol expresses importance attached to housing, it emphasized that every member of a society desires to own a house as a source of prestige, self-recognition and self respect. Grigsby and Roseburg in Jinadu (2007) also viewed housing as a social symbol and summed it up as a symbol of man's status and an extension of his personality.

Jinadu (2007) identified that the varied definitions and conceptions given to housing portray it as an important and indispensable element of human settlement. Housing is therefore seen as a basic human need, which provides spaces for work, sleep and recreation as well as a social requirement.

### **2.1.2 Housing policy**

One of the major housing policy initiatives was the Policy on affordable housing that was initiated in 1979 by the Shehu Shagari administration. The policy though laudable was unable to meet the nation's housing needs because it was unsustainable, that houses will be provided by government (Akeju, 2007)

NHP (2006) stated that the ultimate goal of the policy is to ensure that all Nigerians own or have access to decent, safe, and healthy housing accommodation at affordable cost. Among the objectives is to provide adequate incentives and an enabling environment for private sectors participation in the provision of housing. Abdullahi and Abdul-Aziz (2012) added that the current policies embrace the private sector as the vehicle to address the severe shortages of houses in the country while the government positions itself as enabler and facilitator in the housing delivery in the country.

Chatterjee (1981) further stressed that a sound approach to the formulation and implementation of housing policies will greatly promote the development of economic and social welfare of the populace, particularly of the poor, in Nigeria. Akeju (2007) opined that the implementation of the housing policy reforms was a promising beginning, but a lot remains to be done.



### **2.1.3 Housing development before colonial era**

Before the advent of the colonial rule (Pre- 1928) at the dawn of the 20th Century, a communal system of housing delivery was practiced in most Nigerian communities. Houses were built through communal efforts by peer groups, members of age group would turn out in mass on appointed day to assist the builder in whatever task of the project. In return, the builder would provide sumptuous meals while the project lasted and vice versa, this system continued up to 1928 (Bala and Bustani, 2009).

Because shelter is necessary to everyone, the problem of providing adequate housing has long been a concern not only to individuals, but to governments as well. Thus, most nations, in one form or another, continue to place access to affordable housing at the top of their priority lists (Encarta Interactive World Atlas, 2007 in Ademulyi, 2010).

According to Ademulyi (2010), all governments in Nigeria since independence highlighted housing as a major priority. In Nigeria, the major steps taken, so far, towards solving the housing crisis in the country include:

### **2.1.4 The colonial period**

Housing provision in Nigeria commenced before the country got her independence (1928- 1960) from Great Britain on October 1, 1960 (Ademulyi, 2010). Government started to intervene in the housing sector in 1928. National Housing Policy (NHP, 1991). However, the housing schemes were limited to expatriate staff and selected indigenous public service employees. It was only possible to sell the units of houses to civil servants through payroll deduction system (Bala and Bustani, 2009).

The other notable developments during the Colonial era were the establishment of the Nigeria Building Society (NBS) in 1956 to provide housing loans to both civil servants and the Nigerian public and the creation of some Housing Corporations to provide

houses to populace at affordable prices. The NBS did not achieve much owing to poor funding while the housing corporations were unable to extend their services to the low-income earners (National Housing Policy, 1991).

### **2.1.5 Post- independent period**

In the Post-Independence era (1960-1979), the first National Development plan (1962-1968) accorded low priority to housing with focus on accommodating government staff in the regional capitals and Lagos, thus a low achievement was recorded (Aribigbola, 2000).

The second development plan (1970-1974) targeted to construct 60,000 housing units (15,000 units in Lagos and 4,000 units in each of the then 11 state capitals). There was marginal improvement at the end of that period; the target was not met due to lack of finance and the essential technical manpower. The prime mover of this programme was Federal Housing Authority (FHA) to co-ordinate the housing programme. The Federal Housing Authority (FHA) was established under Decree No. 40 of 1973 to, among other functions, implement housing programmes approved by the Federal Government. Omole (2001) mentioned that unfortunately some were not completed in some of the cities.

The third Development plan (1975-1979), did not record significant success, the Federal government planned to construct 202,000 housing units, planned basically for low and middle income earners, at the end of the planned period only 28,000 housing units were completed, representing 14% achievement ( Aribigbola, 2000 and Jolaoso, 2001).

Ademuliyi (2010) also mentioned that during the Fourth National Development Plan (1980-1985) period, three schemes were embarked upon: the direct housing construction, under which 2,000 housing units were to be built in each state annually, while the Federal Housing Authority (FHA) was to construct about 143,000 low cost housing units across the country. Site and Services Schemes were also to be provided. At the end of the plan period, a success of 20% was recorded.

The period of 1990-1992 rolling plan, efforts were intensified on prototype housing schemes, 72 housing units were constructed and allocated in 1990, while the construction of 218 units commenced in Lagos and Abuja. During 1994-1996 rolling plan, the national housing program was launched with the target of constructing 121,000 housing units of various models all over the country by the end of 1996; however, by the first quarter of 1997, fewer than 2,000 housing units had been completed. (Federal Republic of Nigeria, 1998; Federal Republic of Nigeria, 2000). As at 1994 a total number of 29,154 housing units were provided through public funding at Abuja.

In addition, as part of the efforts to increase houses for the masses in the country, the Federal Government in 2004 pledged to adequately fund research pertaining to the manufacture and the use of local materials in the sector, with the aim of providing 40,000 houses with at least 1,000 per state before year 2007. However, as observed by Ademiluyi & Raji (2008), little had been done to meet this target barely two months into the year 2007, despite these interventions and efforts by the governments, actual achievements in terms of providing adequate housing in the country remain essentially minimal.

Akeju (2007) mentioned that Nigerian Housing Sector reported on African Independent Television (AIT), that between 1973 and 2006, the Federal Housing Authority (FHA) built only 30,000 housing units nationwide.

#### **2.1.6 Housing development in Niger State**

Housing delivery for civil servants in Niger State started after the creation of the state in 1976 when some government quarters were constructed under the supervision of Niger State Ministry of Works, Transport and Housing. Later, Niger State Housing Corporation was created for housing delivery in the state in 1979. The overall achievement was less than 3,000 units up to 2007. Niger State Strategy for Sustainable Housing (NSESSH, 2007).

Accordingly, the real challenge for government is to develop a housing delivery system that is effective and sustainable so that all income groups can have access to housing with little or no subsidy from government with the active participation of PPP. Niger State Gateway to Land and housing (NSGL&H, 2007).

Furthermore, to address the problems comprehensively, a well set of articulated objectives is to be pursued by the State Government in order to achieve the stated goal, which include: Facilitating private sector participation in housing delivery system in recognition of the huge housing backlog in the state ;inadequate capacity and resources of government to address the problems alone; and the huge financial, managerial and technical capacity of the private sector to ensure effective PPP in housing (NSGL&H, 2007).

The National housing demand profile has put the current housing deficit based on 8 person per household, at about 12 Million housing units, this may translate to 30,000 units for Niger State, while the existing stock is less than 3,000 units (NSESSH, 2007). Therefore, the way forward is to reposition the housing delivery machinery in the state in line with main thrust of the revised National Housing Policy of 2004 which emphasis on effective and affordable mass housing delivery through PPP as mandated by the Habitat Agenda Adopted by the Second UN conference on Human Settlement (HABITAT II) in 1996 (NSSDP,2007). Akeju (2007) also added that government alone cannot fill the housing gap of housing development, we would have to leverage on the resources available in private sector in order to fill the gap.

## **2.2 Social Housing**

### **2.2.1 Concept of social housing**

Social housing is the response by government to the housing challenges of ‘No and Low’ income earners. The government social responsibility to the vast majority of the population who ordinarily would not have been able to afford them, it stabilizes the society by freeing it from the insecurity challenges occasioned by homelessness (NHP,2012).

Social housing is a term used to describe housing owned and managed by the state, not for profit organization or a combination of the two, usually with the aim of providing affordable rental housing. It is the provision of affordable non-profit driven mass produced houses that could be occupied by low income earners, who may wish to save towards eventually buying such houses with time.

Social housing primarily covers the rental tenure option and excludes immediate individual ownership by the residents. The conversion of rental schemes into ownership become viable options in the long term and the conversion of rental schemes to sale options are not considered within first 10-15 years (Zubairu, 2012).

In the UK, social housing is the type of housing that is provided by the government particularly local governments, where the rent payable by tenants is not determined by the market forces of demand and supply .Basically, the rent is controlled by the government through legislation ,so that those on low income still have somewhere to live (Efere,2012). Different countries like England, Germany, South Africa have experience of social housing programme (Zubairu,2012).

### **2.2.2 Social housing in Nigeria**

There is urban population growth in most parts of the world according to United Nations including Nigeria. Nigeria has one of the fastest growing urban centers in the world and the data shows that Nigeria is made up of poor and low income families, close to half of the urban poor are chronically poor without any means of livelihood. Social housing must be encouraged to support residents in their efforts to fulfill their own housing needs (Zubairu,2012).

According to Efere (2012), there is acute shortage of social housing in Nigeria where workers have to stay in neighboring states because of high cost of rent. So, not many people in Nigeria fully understand how social housing works in practice. However, Social housing initiatives should not be a trial and error. It is project where the country should expect 100% success rate.

According to Bala (2013), the proposed Workers District Abuja would be a series of housing estate within a city, purpose-built to serve the social housing proposition of Nigeria Social Insurance Trust Fund (NSITF) but fully in consonance with the Abuja Master plan and also across Nigeria. Processes are on-going to allocate a district to NSITF for the purpose of this scheme, underlining the support of the Federal Government.

### **2.2.3 Social housing scheme, bill and policy**

The National Assembly is set to pass the bill on social housing, now in its final stage at the Federal legislative into law. The Federal Republic of Nigeria argued that as a signatory to the United Nations Declaration of Human Right which recognizes in putting in place policies that will boost ownership among Nigerians and develop social housing for No-income and Low-income earners in the country is yet to pass the bill.

Among the objectives of the provision of social housing is to significantly improve the well-being of the poor, the needy and other vulnerable groups in the society, such as the physically challenged, the homeless, and a critical mass of the citizens who fall into this group, also to provide a sustainable way of reducing the housing deficit in the country, estimated at about 16-17 million units nationwide, as at 2011(NHP, 2012).

Zubairu (2012) mentioned that in order to implement an effective and sustainable social housing programme in Nigeria an equally viable and robust National Social housing policy have be to enacted.

## **2.3 Public-Private Partnership (PPP) Housing Development**

### **2.3.1 Concept of PPP**

The concept of Public-Private Partnership (PPP) has existed for centuries in the USA and Europe but has become more prominent in recent decades in local economic development. The concept is to accelerate infrastructure development and efficient service delivery to attain economic, industrial and technological competitiveness which will improve the quality of life of its citizens. Niger State Policy & Operational Guideline (NSP & OGPPP, 2007).

PPP is the idea of bringing Private funds to finance public sector infrastructure. It involves at least one public and one private sector institution as partners. PPP arrangements are growing in use and acceptable as an alternative and effective method to mobilize additional financial resources and benefits from private sector efficiencies.

Each partner to a PPP has responsibility, the Public Sector must transform its role from a service provider to Manager/Monitor of private contractor, guaranteeing and enhancing public benefits from PPP. However, government worldwide have sought to increase the involvement of the private sector in the delivery of public service (Ng, 2000).

Thus, in a practical sense, PPP' represent a form of collaboration under contract by which public and private sectors, acting together, can achieve what each acting alone cannot. Numerous member countries of the Organization for Economic Corporation and Development now have active PPP programs, as do a growing number of developing countries (Gerard, 2001). The idea of bringing in private finance to fund public sector



infrastructures originated with the early occurrence of PPP (The World Bank and the International Finance Corporation, 1992).

Therefore, Carroll and Steane (2000) define PPP to encompass a very wide diversity of partnerships and the circumstances in which they arise as ‘agreed cooperative ventures that involves at least one private and public sector institution as partners. Bing and Akintoye (2003) also describe PPP as involvement of private companies in the design, financing, construction, ownership and or operation of a public sector utility or service. Such partnership between the public and private sectors are now an accepted alternative to the traditional state provision of public facilities and services. The joint approach allows the public sector client and private sector supplier to blend their special skills and to achieve an outcome which neither party could achieve alone.

The United Nations General Assembly mandated the UN–HABITAT to ensure a global social and environmental promotion for sustainable towns and cities with the goal of providing adequate shelter for all. To ensure this, the first United Nations conference on human settlements (HABITAT I) was held in 1976, another summit (HABITAT II) was held in 1996. The New Housing Policy of the Federal Government of Nigeria in consonance with the United Nations ‘Agenda 21’ advocated the need for private sector partnership with the public sector in housing delivery (Daramola *et al* .n.d).

Public-private partnership is an approach that has been used in provision of affordable housing in the United States, as well as in a number of other countries, since 1980s. In these partnerships, private developers, non-profit agencies, receive some funds or support from the municipal, state, or federal government (or all three, in some cases) in

order to build or renovate and manage affordable housing. This can be used as a means of encouraging low-income home ownership. This is also an approach that has been used in a number of other countries. Public-private partnership (PPP) is the most prominent urban housing policy that has emerged in the last decade in India. Housing reforms in Kolkata, under the flagship of PPP, has taken the city into a different league after decades of ineffective housing policy (Sengupta and Tipple, 2007).

Eziyi (2010) mentioned that the adoption of Public-Private Partnership (PPP) in housing provision in Nigeria is intended to increase urban housing stock and address housing affordability and accessibility challenges. Olotuah and Fasakin (2004) opined that the private sector can effectively meet the housing needs of the populace if it is properly stimulated and sensitized. The Public sector only needs to provide the enabling environment for it to operate.

Quinn (2009) mentioned that governments in most developing countries face the challenge to meet the growing demand for new and better infrastructure services. However, as available funding from the traditional sources and capacity in the public sector to implement many projects at a time remain limited, governments have found that partnerships with the private sector is an attractive alternative to increase and improve the supply of infrastructure services.

### **2.3.2 Public Private-Partnership (PPP) in Niger state**

In Niger State, government initiating the Public Private-Partnership (PPP) in the housing sector is to facilitate the development of large scale housing in the state. The specific objectives are: to enable low and medium income to own affordable houses on

owner-occupier basis; to take advantage of the technical, managerial and financial expertise of the private sector Real Estate Developers in achieving the stated aim of the government (NSP&OGPPP,2007). The current effort of Niger State is to construct 5,000units for the entire state, on the basis of PPP (Niger State Development Action Plan,2007).

In addition, Niger State Gateway to Land &Housing (2007) stressed that the peculiarities of Niger State to adopt PPP include, infrastructural decays and ever increasing infrastructural demand, limited resources, fast tracking infrastructural development and service delivery, among others. PPP application covers areas of infrastructure (Housing), agriculture, environment, water, education, and health.

### **2.3.3 Benefits of PPP**

#### **2.3.3.1 Benefits of PPP for the public sector**

Obozuwa (2011) observed the benefit of PPP which include:

PPP improve service delivery by allowing both sectors to do what they do best. PPP enhance efficiency, broaden access, and improve the quality of public services. Improve cost-effectiveness by taking advantage of private sector innovation, experience and flexibility, can deliver services more cost-effectively than traditional approaches. The resulting savings can then be used to fund other needed services. The arrangement provides assets and delivers services by allocating responsibilities and business risks among the various partners. Government score business is to set policy and serve the public.

Quinn (2009) added that governments worldwide have increasingly turned to the private sector to provide infrastructure services due to some benefits which include: Increased efficiency in project delivery, operation and management; availability of additional resources to meet the growing needs of investment in the sector.

### **2.3.3.2 Benefits of PPP for the private sector**

PPP give the private sector access to secure long-term investment opportunities. Private Partners can generate business with the relative certainty and security of a government contract. They can expand their PPP to create additional business opportunities. For example, the company can market its experience in other jurisdictions, once it has established a track record of working successfully with the public sector in Nigeria (Obozuwa, 2011).

### **2.3.4 PPP models**

Obozuwa (2011) mentioned that, in order to guarantee value for money (VFM), the relative strengths and weaknesses of each PPP scheme should be considered. Depending on the sector of application, some models are better suited than others in delivering targeted outputs and in ensuring accurate risk management. Choosing the wrong model or inaccurately evaluating the risk management capacities of each party may have extremely costly consequences and a negative impact on public accounts. Some types of partnerships are more prevalent in some nations than others. PPP approach come in so many types and forms, past analysis have recognized five (5) types of private involvement namely; service contracts, leasing, joint ventures, concessions and privatization (Bing and Akintoye, 2003).

Eziyi (2010) also opined that PPP housing provision scheme include site and services and turnkey schemes. Site and Services involves allocation of plots while the turnkey is a complete housing delivery scheme with government agencies. A typical PPP may take the form of design-build finance-operate (DBFO); Build Operate Transfer(BOT), Build Transfer Operate, Turnkey(TK) etc.(NSP&OGPPP,2007).

### **2.3.5 Private Partners actors in Nigeria.**

Eziyi (2010) revealed that the principal actors in the PPP housing provision in Nigeria included three categories of organizations, namely, Federal and State governments as well as Private sector organizations. The Federal Ministry of Environment Housing and Urban Development (FMEHUD), the Federal Housing Authority (FHA) and the Federal Mortgage Bank of Nigeria (FMBN) formed the first category of organizations. The second category are the state government agencies comprising of Housing and Property Development Corporations and Primary Mortgage Institutions (PMIs), while the last category are the private sector organizations, including commercial private housing developers, building contractors and housing financing institutions (e.g., Private Primary Mortgage Institutions and commercial banks). The last category of organizations formed the bulk of membership of the Real Estate Developers Association of Nigeria (REDAN).

Daramola *et al* (n.d ) stated that the major players in the private sector partnership include G. Cappa, Jr Boygues, Taylor Woodrow, Julius Berger and some indigenou contracting outfits. Recently, some large-scale estate developers like HFP Engineering Nigeria Limited among others have joined in production of residential houses .A sample of the contents is attached as Appendix XI.

### **2.3.6 Achievements**

Uzodinma (2012) mentioned that Partnerships have been used with great success to construct and maintain social housing in both the United States and the United Kingdom. In the United States, PPPs are the country's main source of social housing. Eziyi (2010) revealed that about 3,078 housing units of different typologies have been provided through turnkey housing schemes. Also a total of 493 housing units were provided in 3 cities (Lagos, Port Harcourt and Uyo).

Niger State administration commenced the PPP implementation in 2007 and grant concessions to various investors. Among houses constructed include 500 Units M.I.Wushishi Housing Estate, Minna comprising of 2 and 3 Bedrooms which have been completed and occupied, while 1,000units are at various stages of completion (Niger State housing Corporation, 2013).

However, infrastructure development has in recent times assumed a central importance in Nigeria's fight to attain social and economic stability. The federal government and all state governments are using infrastructure as the focal point of their administrations and policy enactments. Infrastructure generally means the fixed provision of tangible assets on which other intangibles can be built on it revolves the provision of Housing, Power (electricity), Transport, Education, Communication, and Technology (Obozuwa,2011).

The present government of Nigeria has proposed to be among the top 20 economies in the world by the year 2020. Therefore, there is need for the development of an infrastructure base comparable to those of other nations in the world. These

Infrastructure and related Investments is necessary for Nigeria to achieve its Vision 2020. Given the huge amounts needed and the drive necessary for development, the Nigerian government does not have the requisite capability to achieve this on its own and has thus among other options embarked upon the use of Public Private Partnerships (PPP) (Obozuwa, 2011).

### **2.3.7 Limitations of PPP**

PPPs have various limitations that should be taken into account while their considerations are made. The major limitations include; not all projects are possible (for various reasons: political, legal, commercial viability, etc.). The private sector may not take interest in a project due to perceived high risks or may lack technical, financial or managerial capacity to implement the project. Change in operation and management control of an infrastructure asset through a PPP may not be sufficient to improve its economic performance unless other necessary conditions are met. These conditions may include appropriate sector and market reform, and change in operational and management practices of infrastructure operation (Obozuwa, 2011).

## **2.4 Housing Affordability**

### **2.4.1 Concept of affordability**

Onyike (2007) argued that the challenge becomes not only to provide the houses but to make the houses affordable to the average Nigerian worker where the wages and salaries are today sharply depressed and incapable of meeting the basic needs of most workers.

Stone(2006) mentioned that within the context of the challenge to ensure access to adequate housing for all, hardly can any indicator be more useful than housing

affordability in offering valid insights on the appropriateness of housing policy interventions. Beyond reflecting the performance of the housing sector, housing affordability uniquely establishes the relationship between people and housing in monetary terms, and at a deeper level expresses the link between social and economic system and the quest for satisfaction of basic human needs that is not merely monetary.

Aribigbola (2006) stated that housing affordability has been widely recognized as an essential issue in creating sustainable built environment especially in the context of developing world cities. Consequently, global efforts at meeting human needs for shelter found expression in its inclusion among the objectives of sustainable development programme and the Habitat Agenda agreed to by the International Community at Istanbul, Turkey in 1996.

Aribigbola (2006) stated that the term 'affordable housing' has come to mean different things to different people. In its broadest sense, affordable housing refers to any housing that meets some form of affordability criterion. One version of this definition uses the concept of housing stress as its criterion for affordability; housing stress is described as a household paying in excess of 30% of net income. In this broad definition, affordable housing means any housing costing 30% or less than of income earners.

The Australian Housing and urban Research Institute (AHURI,2006) defined Housing Affordability as a measure of the financial situation of a household renting or purchasing dwelling for the purpose of living in that dwelling. Kolawole et al (1998) revealed that 90% preferred owner- occupier to rented accommodation.



Affordability as most literature revealed, could be attributed to several factors central among which is the inability of households to afford the available housing products and services on offer (Musa–Haddary, 2011). Turner (1983) refers to affordability as ‘a concept and parameter that measures the ability of a consumer to pay for the services desired by him/her with not more than a given proportion of his/her total income; where such a proportion is set either by self or authorized bodies (Musa-Haddary ,2011).The value of the proportion will be a matter for the individual, group or nation to define within her prevailing circumstances (Mbamali and Obiekwe,2001;Andrew ,2004 ).

Nelson *et al*, ( 2002) describe affordability to largely influenced by two critical factors, each with its own set of variables. One is the household incomes budgeted for housing consumption; the other is the cost of housing products and services that household prefer. Levels of affordability are affected by household’s budgets for their housing preference; when budgets are higher affordability levels increase and vice versa. Higher budgets for housing consumption can be achieved through increase in households’ earnings or financing leverage through borrowings and mortgages.

However, affordability levels are equally influenced by the cost of the products or services. Affordability increases with decrease in the cost of housing, and decreases when housing cost increases. As a function of household budget for housing and the cost of housing (Nelson et al 2002), affordability is expressed as an index of:

$$\frac{\text{Household budget for housing}}{\text{Housing cost}} \text{ ----- equation (1)}$$

OR

$$\frac{\text{Household affordable monthly budget for housing}}{\text{Monthly repayment necessary for a given housing consumption.}} \text{ ---- equation (2)}$$

### **2.4.2 Household income and housing cost**

A primary factor in housing affordability is household income. The most common approach is to consider the percentage of income that a household is spending on housing cost. In Australia, Canada, New Zealand and the United States of America, a commonly accepted guideline for housing affordability is a housing cost that does not exceed 30% of a household's gross income (Andrew, 1998; Aribigbola,2006).

NSGL&H(2007) revealed that Niger state government has to finance the provision of infrastructure (extending water supply,road and drainage) to the project site, as its contribution to the project, otherwise the eventual unit selling price will be much higher than the target population can afford, thereby jeopardizing the objective of government of providing cheap and affordable housing. Albertson (2009) revealed that a common feature of most of the concerns about housing cost is the focus on house prices and home ownership rather than rents.

In Nigeria, the national housing policy does not want any Nigerian to spend more than 30% percent of their income on housing expenditure (Eziyi, 2010). In addition, Niger state government revealed that people are expected to pay 30% of their monthly income on housing (NSGL&H, 2007). When the monthly carrying costs of a home exceed 30–35% of household income, then the housing is considered unaffordable for that household (Aribigbola, 2006).

### **2.4.3 Improvement on housing affordability**

Chatterjee (1981) concluded that there are two major policies components that can address the housing affordability problem in Nigeria. One group of the policies is the reduction of housing prices and the second group of policies is increase in housing

finance. Nelson (2002) opined that to increase the level of affordability, what is required is to reduce housing cost. Kofi (2008) added that if mortgage interest rates decreased, there will be more stable macroeconomic environment and mortgage, and reduction of housing prices. Kolawole *et al* (1998) revealed that the ability to increase participation of targeted groups (the lower level) include;

- i. Extension of repayment period
- ii. Reduction of housing cost
- iii. Reduction of interest rates on housing loan.

## **2.5 Sources of Housing Finance**

Housing finance can be viewed as Private and Public Finance (Ibironke, 2003; Jinadu, 2007).

### **2.5.1 Private sector housing finance**

Ibironke (2003) describes private financing as all sort of development undertaken by individuals, companies apart from government organization. Agbola (1993) referred to finance through the private sector to take different forms or come from different sources. These sources include the following:

- Money from private savings and contributions.
- Money from friends and relatives in form of gift and donations.
- Capital from investment returns
- Loan from banks and other specialized financial institutions.
- Loan from lotteries, raffles, and commonly based donations from NGO or International Donor Agencies.

One or a combination of these sources provides money for private housing construction. However, the amount of money derived from the sources has declined over the years due to harsh economic climate in the country. This is why more and more people, most especially the civil servants now rely heavily on public sources of finance (Jinadu, 2007).

### **2.5.2 Public sector housing finance**

The Public sector housing finance is referred to as government sources of finance .The first conscious effort made in housing financing in Nigeria was 1956 when the Colonial Development Corporation (CDC) in conjunction with the central government and eastern regional government formed the Nigeria Building Society (NBS) purposely for lending money for house ownership. Because of its credit term its common orientations and lack of funds, the society was able to serve a restricted section of the population. However, Housing Corporation was introduced. Some of sources of housing finance from public sectors include, Housing Corporation: The function include; to acquire land, develop and manage housing estates, to make loans available to people who qualified for such loans to build their own houses.(Falegan, 1980).Others include:

#### **2.5.2.1 The Federal Mortgage Bank of Nigeria (FMBN)**

The Nigerian Building Society (NBS) was converted to Federal Mortgage Bank of Nigeria in 1977.Federal Mortgage Bank of Nigeria (FMBN,2010).In 1979 the impact of FMBN was insignificant as only few loans were given principally to few middle and high income groups in the country (NHP,1991).The Bank operates as an effective vehicle for increasing the mobilization of long-term funds, lending volume and expansion of mortgage lending services to all segments of the Nigerian population. The

FMBN started the management and administration of the contributory savings scheme known as the National Housing Fund (NHF) established by Act 3 of 1992.

Madawaki (2011) lamented that the ratio of FMBN's loans to actual costs of the various classes of housing units are far below 70% of the actual costs of each of the different classes of housing units for which applications were filed.

#### **2.5.2.2 National housing fund (NHF)**

National Housing Fund (NHF) took over the function of National Provident Fund (NPF) which was established under the NPF Act of 1961 (Jinadu , 2007). The NHF was established subsequent to the promulgation of the National Housing Fund Decree No.3 of 1992 as a mandatory contributory scheme to mobilize cheap and long term funds for housing credits. The Fund represented the financial component of the new National Housing Policy, which was adopted in 1991.

NHF is a pool that mobilizes long-term funds from Nigerian workers, banks, insurance companies and the Federal Government to advance loans at soft interest rates to its contributors. The banks overall mandate is to promote the delivery of affordable and modern houses to Nigerians. It also aimed at encouraging a multiplication of housing finance institutions, enhancing mobilization and growth of long-term funds and making loans affordable to more borrowers. Other objectives of the fund include:

- Ensuring constant supply of loans to Nigerians for the purpose of building, purchasing and improvement of residential houses,
- providing incentives for the capital market to invest in property development,

- encouraging the development of specific programmes that would ensure effective financing of housing development and
- to provide long-term loans to mortgage institutions for on-lending to contributors to the fund.

It is also expected to insulate the housing finance system from the fluctuations that had characterized its past reliance on government intervention. This is consistent with the practice in other countries especially, as sustainable housing finance operations require the mobilization of private sector (FMBN, 2010)

### **2.5.2.3 Primary Mortgage Institution (PMI)**

The promulgation of the Mortgage Institutions Decree No. 53 of 1989 provided the regulatory framework for the establishment and operation of Primary Mortgage Institutions (PMI) by private entrepreneurs. The FMBN under the decree became the apex institution, which regulates primary mortgage institutions and was empowered to license the PMIs as second tier housing finance institutions. The PMIs, under the Decree were to mobilize savings from the public and grant housing loans to individuals, while the FMBN mobilizes capital funds for the primary mortgage institutions. The PMIs were expected to enhance private sector participation in housing finance (FMBN, 2010). However, according to information gathered from ASO Savings in 2012 which is the PMI for Mohammed Inuwa (M.I) Wushishi Housing Estate revealed that 150 applied and yet to benefit from any loan.

According to Akeju (2007), provision of houses through the creation of mortgages is taken for granted in developing countries; however, it remains a major challenge in developing countries, especially in sub-Saharan Africa. Unfortunately, for over 47 years

of its independence, Nigeria is yet to develop a vibrant mortgage market and houses continue to be provided through the tortuous traditional method of buying land and building over some years, which could be an individual's entire life time. In many cases such buildings are left uncompleted or individuals have to deplete their entire life savings in order to build a home.

However, in order to improve Housing Finance in Niger state, the State Government shall revive one of its two Primary Mortgage Institutions (Niger House Building Society and Merry Building Society), to improve access to the National Housing Fund, State Government will mobilize long-term funds from the National Housing Fund and explore partnership with viable Primary Mortgage Institutions for funding (NSGL&H, 2007).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Methods**

The research was carried out using both quantitative and qualitative data. The quantitative data (housing cost, repayment amount and period) was sourced from the government memorandum of understanding (MoU) containing the terms of the housing scheme. Supplementary data was then obtained through interview with government officials (Niger State Housing Corporation), sample content attached to appendix II. Structured questionnaire survey was used to source data both quantitative and qualitative data from the allottees.

#### **3.2 Data Collection**

##### **3.2.1 Data Collection Instrument**

Primary data for the research was obtained through field survey, using structured questionnaire and interview while the secondary data was obtained through a checklist used for extracting information from relevant records; and also through review of literature.

##### **3.2.1.1 Structured questionnaire**

The questionnaire was designed in two parts (Sections A and B). Section A was used to obtain demographic information of the respondents (beneficiaries of the Niger State Public worker allottees in Mohammed Inuwa (M.I) Wushishi Housing Estate, Minna, Niger State). The information includes; age of allottees, period spent in service and salary grade level.



Section B involves information for the assessment of the housing affordability of the allocated houses by respondents (beneficiaries of the Niger State Public worker allottees in M.I.Wushishi Housing Estate Minna, Niger State). This section includes assessment of the type of houses, ability to pay from other sources, ability to pay before repayment period, areas to be improved upon; level of respondent's satisfaction and dissatisfaction. A sample of the questionnaire is attached as Appendix 1.

#### **3.2.1.2 Interview**

The interview was divided into two parts. First part forms questions and the other part is the response (Answer).The interview was conducted with the professionals (Quantity Surveyors, Architects and Estate Surveyors) of Niger State Housing Corporation to supplement other data already collected. These contained contribution of Public and Private sectors on PPP housing development, the allocation,other financial commitment apart from the real housing cost. A sample of the interview contents is attached as Appendix 11.

#### **3.2.1.3 Checklist**

The checklist was obtained from Niger State Housing Corporation, Minna and was designed to get information on the types of houses and numbers built through PPP housing development in M.I.Wushishi Housing Estate, number allocated to Niger State Civil Servants, the housing cost and repayment period. A sample of the checklist contents is attached as Appendix III.

#### **3.2.1.4 Office file records**

Information from various Ministries and Parastatals include housing developments in Federal and Niger State, the Civil servants salary scale and the populations of Niger State Public workers. Samples of the records are attached as Appendix IV, IX to XII.

#### **3.2.2 The Study Area and Population**

The study area is Minna-Niger State. The State is one of the 36 states of Nigeria, created on 3 February, 1976 from the defunct North-Western State and situated in North-Central geo-political zone of Nigeria. It comprises of 25 local government with population estimated to about 3,954,772 as at 2006 census and covers a land area of 74,244 square kilometer covering about 8% of the total land area of the country. The Civil Servants population is about 33,431(Niger State Development Action Plan, 2007), The target population of this research was the number of Niger State Public worker allottees in M.I.Wushishi Housing Estate Minna;Niger State Capital.

#### **3.2.3 Sampling Frame and Sample Sizing.**

According to Niger State Housing Corporation, (2013).There were a total of 500 housing units in the Estate (M.I.Wushishi Housing Estate) under PPP housing scheme out of which 350 housing units were allocated to Niger state civil servants and the remainder to non-civil servants. Thereafter, the 350 allottees formed the sample frame for this study. The sample size of 187 used was obtained from the 350 number of allottee using equation (1) below;

n = Sample Size

$$n = \frac{N}{1 + N(e^2)} \text{-----Equation 1 (Israel, 1992)}$$

Therefore:  $n = \frac{350}{1 + 350(0.05^2)} = 187$  .Where;

Study population (N) = 350 allotees

Confidence level = 95%

Level of Precision (e) = 5%

### **3.2.4 Sampling Techniques**

Purposive sampling technique was employed for questionnaire administration to allotees. According to Eric (1998), the researcher will be able to administer the questionnaire purposively to those who have certain characteristics. Therefore, the characteristic in this study was that the allotees must be the occupants of the houses; occupants of the houses who were not the actual allotees were not considered. Purposive sample approach was adopted in order to prevent questionnaire administration to such allotees.

### **3.3 Methods of Data Analysis**

Descriptive analysis using Statistical Package for Social Sciences (SPSS) and Microsoft Excel and Mortgage Institutions' discounted cash flow model were used in data analysis. Cross tabulation was further used to establish relationship between some variables (salary level and house types, house type and worth of houses). Presentation of results was by means of frequency tables, bar chart and simple percentage. Microsoft Excel was used to analyze the existing repayment and proposals for enhancing affordability.

According to (Haddary, 2011) , the formula used to calculate the mortgage affordability is the Mortgage Institutions' discounted cash flow techniques for computing Mortgage monthly repayments over a given period and interest rate. It was used to compare the actual monthly repayment of the respondents. The mortgage affordability analysis was conducted using equation 2;

$$R_m = P \left[ \frac{(1+i_m)^{n_m} i_m}{12(1+i_m)^{n_m} - 1} \right] \text{-----Equation 2}$$

Where;

$R_m$  =monthly loan repayment amount

$P$  = Housing cost

$n_m$  = ( Monthly repayment period)

$i_{m=monthly\ interest} = \frac{\text{annual interest}}{12}$

However, equation 2 was used to calculate the mortgage monthly repayment amount for 2 and 3 bedroom houses allocated to Niger State Civil Servants allottees in order to determine the affordability level of the allocated houses to the workers.

## **CHAPTER FOUR**

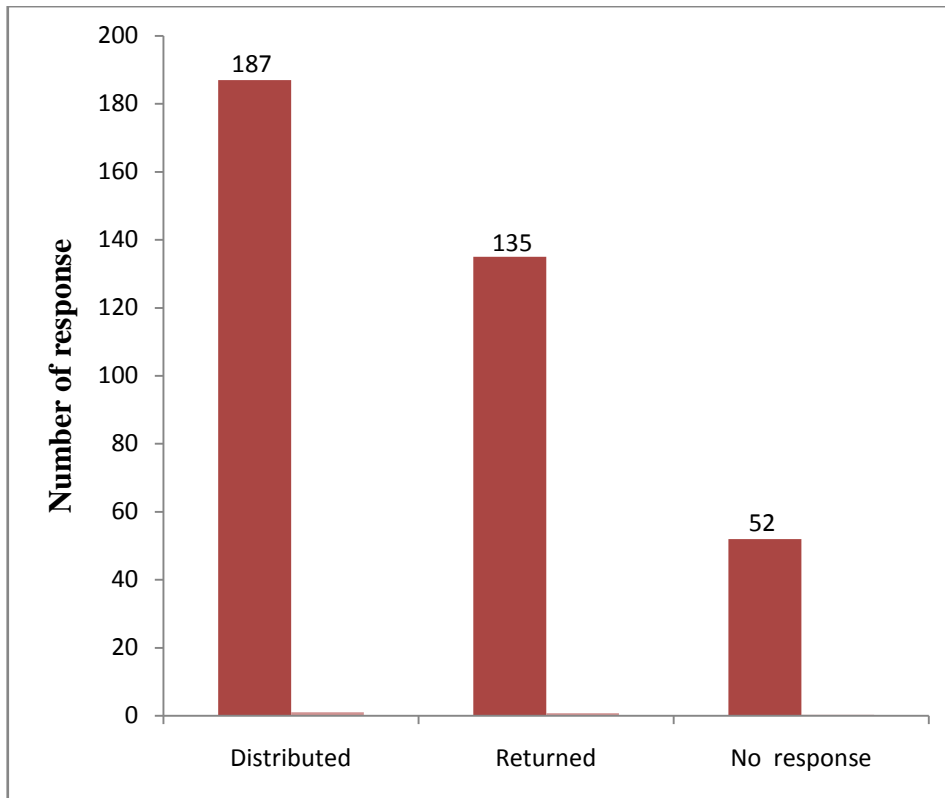
### **DATA PRESENTATION, ANALYSIS, AND RESULTS DISCUSSION**

The aim of the research study was to evaluate the existing repayment schedule for allottees of the PPP housing in Niger State relative to their income, with a view for enhancing the affordability. There are 4 objectives in order to achieve the aim. Objective one has been covered in chapter two (Literature review) while objectives 2, 3 and 4 would be discussed in this chapter. The data obtained for the research work was presented, analyzed and discussed.

#### **4.1 Analysis of Administered Questionnaire**

##### **4.1.1 Preamble**

The number of questionnaires administered was 187. The target respondents were Niger State Civil Servant allottees who have the characteristics to fill the questionnaire (the occupant of the house not the tenant or the relatives). Fig.1 shows the breakdown of the administered questionnaires based on the number of responses obtained.



**Fig 1: Questionnaires Distribution and Response**

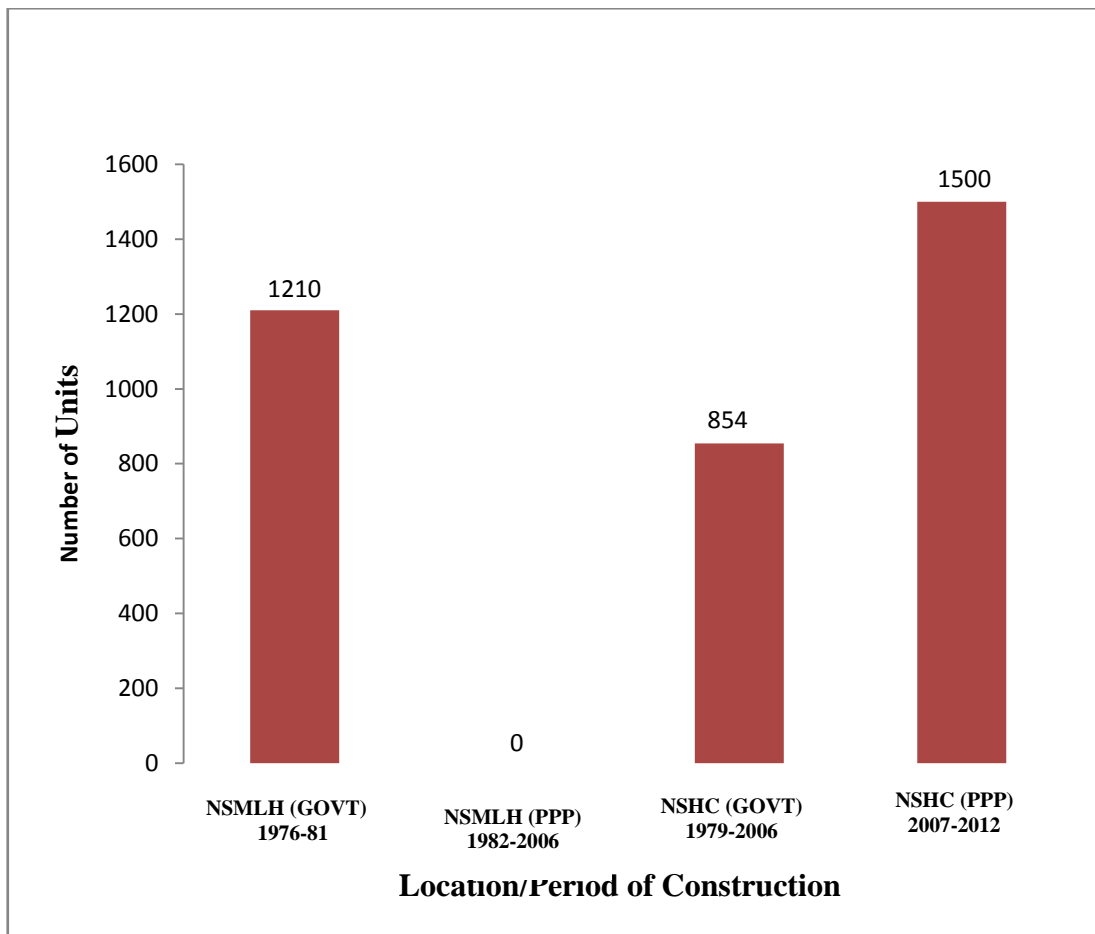
Fig.1 depicts the level of response to the questionnaires distributed which was 187 (Section 1.5.4). The response of 135 which amount to 72% were properly filled and returned. Following Moser and Kalton (1971) commendation that, 30-40% level of return rate can be considered adequate. Therefore, the percentage of the returned questionnaires is adequate for the analysis.

#### **4.2 Performance of Public and Private Sectors in Housing Scheme in Niger State**

This section disclosed housing development by Niger State both in Public and Private Sectors and the allocation of the houses to the allottees. The results obtained were shown in bar charts in figures 2 to 4.

#### 4.2.1 Total number of residential houses constructed in Niger State

The total number of residential houses constructed in Niger state from 1976-2013 by Niger State government alone and the number constructed by the state in conjunction with the organized private developers using Public –Private Partnership were shown in fig 2.



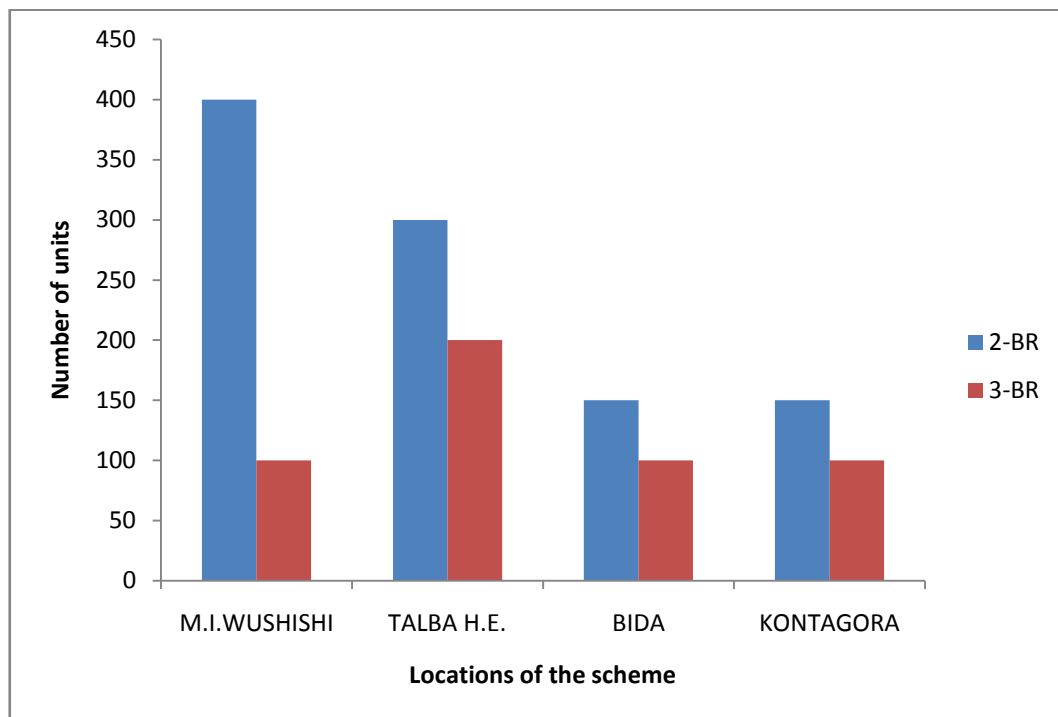
**Fig. 2: Total Number of Housing Units Constructed by Various Public and Private Developers in Niger State (1976 - 2012).**

From the bar-chart, Niger State Ministry of Land & Housing (NSML&H) formerly known as Ministry of Works and Housing (NSM&WH) constructed 1,210 between 1976-1981, there was no PPP arrangement as at 1982-2006. Niger State Housing

Corporation (NSHC) on the other hand constructed 854 houses between 1979-2006, totaling 2,064 houses. From 2007 to 2012, a total 1,500 units are under construction via PPP housing development scheme in which some have been completed and allocated.

#### 4.2.2 Total number of housing units constructed by various private developers (PPP) in Niger State (2007 - 2012)

The total number of housing units and types of houses constructed under PPP housing development in 3 locations of Niger State as at 2007- 2012 were shown in fig 3.



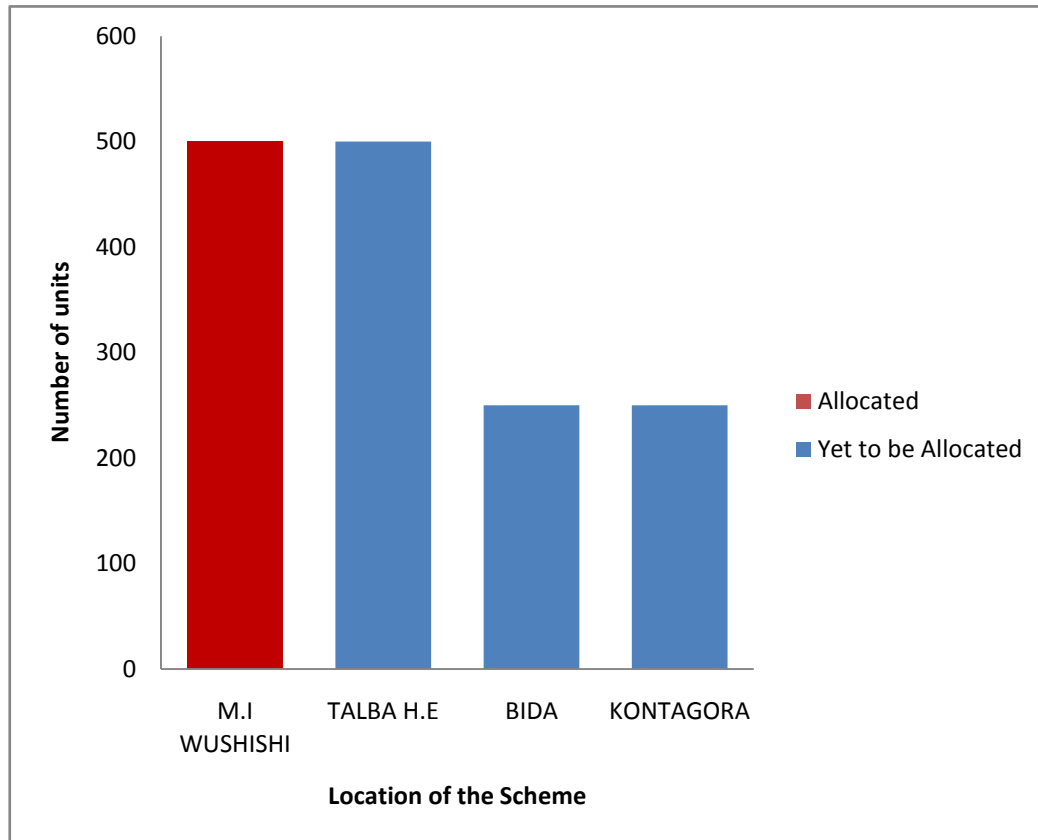
**Fig 3: Total Number of Housing Units Constructed by Various PPP Developers in Niger State (2007 - 2012)**

Fig.3 indicates the various PPP housing development schemes across the state which consists of M.I.Wushishi and Talba Housing Estate in Minna, 500 units each respectively. Bida and Kontagora 250 units each, totaling 1500units housing units of 2 and 3 Bedrooms detached and semi-detached bungalow.



#### 4.2.3 Numbers of allocated and yet-to-be-allocated houses under PPP arrangements in Niger State.

The number of houses allocated and those yet to be allocated in various locations were shown in fig 4.



**Fig 4: Allocated and Yet-to-be-Allocated Houses under PPP Arrangements in Niger State.**

From the bar chart, Fig.4 shows only M.I Wushishi Housing Estate was allocated while the remaining estates in other locations are yet to be allocated. However, if other ones are allocated, this will enable civil servants to improve their home ownership (Niger State Gateway to Land and Housing, 2007).

### 4.3 Respondents' Profile

Respondents were asked to indicate the demographic data which formed section A of the questionnaire and objective 2 of the study. The responses obtained were shown in Table 1 and 2.

#### 4.3.1 Years of service of respondents

This gives the position of the respondents with respect to repayments of the housing loan within their service period .It is presented in Table 1, from which was shown that 62.2% have put less than 15 years of service, implying they have more than 20 years for the loan repayment.19.3% have at most 20 years and 18.5%have at most 15 years for the loan repayment.

**Table 4.1: Year of Service of Respondents**

<b>Period of Service</b>	<b>Frequency</b>	<b>Percentage</b>
Less than 5 yrs	6	4.4
5yrs - Less than 10yrs	36	26.7
10yrs -Less than 15 yrs	42	31.1
15yrs - Less than 20 yrs	26	19.3
20yrs - Less than 30 yrs	25	18.5
<b>Total</b>	<b>135</b>	<b>100.0</b>

Source: Field survey, 2013

Table 4.1 shows the categories of allottees' years of service in civil service. Respondents who have spent 5-15years in service are 57.8%. This reveals that majority of the allottees have more years for the repayment of their housing loans.

### **4.3.2 Age of respondents on appointment to service**

This gives the position of the respondents with respect to repayments of the housing loan within the age (60 years). It is presented in Table 2, from which we see that most of respondents are between 20-40 years of age.

**Table 4.2: Age of Respondents on Appointment to Service**

<b>Age of Respondent</b>	<b>Frequency</b>	<b>Percentage</b>
18 - 20 yrs	10	7.4
20 - 30 yrs	68	50.4
30 - 40 yrs	56	41.5
40 - 50 yrs	1	0.7
Total	135	100.0

Source: Field survey, 2013

Table 4.2 shows that majority (91.9%) of the respondents appointed to the service are between 20- 40 years of age. This enables majority of the allottees to be able to repay the housing loan within the government stipulated repayment period of 20 years before retirement.

### **4.4 Assessment of the Affordability of the Allocated Houses by Respondents.**

The assessments of the affordability of the allocated houses are presented in Tables 3 to 6.

#### 4.4.1 Respondents' salary level and house type allocated

The information above was presented in Table 4.3 and can be seen that the allocation of houses are 2-bedroom and 3-bedroom houses to all categories of allottees.

**Table 4.3: Respondents' Salary Level and House Type Allocated**

Salary level	House type		Total
	2-bedroom / (%)	3-bedroom / (%)	
GL 1- 6	2(1.54%)	1(0.7%)	3(2.2%)
GL 7 - 10	46(34.1%)	8(5.9%)	54(40.0%)
GL 12 -14	43(31.9%)	28(20.7%)	71(52.6%)
GL 15 and Above	3(2.2%)	4(3.0%)	7(5.2%)
<b>TOTAL</b>	94(69.6%)	41(30.4%)	135(100%)

Source: Field survey, 2013

The above table shows that 69.6% of respondents occupy 2-bedroom houses, 66% falling under GL 7-14 while 30.4% were allocated 3-bedroom apartment in the estate with majority; 26.6% falling also under GL 7-14. This indicated that low and high income classes are very few among the allottees of houses in each of the two categories.

#### 4.4.2 Maximum affordable cost to pay for the allocated houses.

Table 4.4 shows the maximum amount respondents could afford for the types of houses allocated to them in order to determine affordability level of the respondents.

**Table 4.4: Maximum Cost Respondents Can Afford to Pay For The Allocated Houses.**

House type	Amount(₦/M)					Total
	1.5-1.99	2.0 - 2.49	2.5 - 2.99	3.0- 3.39	3.4- 3.80	
<b>2-bed room</b>	62(45.9%)	22(16.3%)	10(7.4%)	0(0%)	0(0%)	94(69.6%)
<b>3-bed room</b>	6(4.4%)	18(13.4%)	9(6.7%)	5(3.7%)	3(2.2%)	41(30.4%)
<b>Total</b>	68(50.3%)	35(29.7%)	19(14.1%)	5(3.7%)	3(2.2%)	135(100%)

Source: Field survey, 2013

Table 4.4 shows that 46% of the respondents are occupying 2 -bedroom and believe that the housing cost should not exceed ₦1.5m- ₦1.99m Naira, while most of the occupants of 3- bedroom mostly revealed that maximum cost should not be more than ₦2.0-2.49m naira.

#### **4.4.3 Respondents' ability to pay from other sources of income.**

The opinions of respondents were sought on the ability or inability of the respondents to pay from other sources of income, table 4.5 shows the result.

Table 4.5 below shows 26.7% respondents were confident that they can pay for the houses with money realized from other sources of income (informal income) mostly the middle class (GL12-14). Infact, majority 73.3% of the respondents cannot raise funds from other sources in order to pay for the houses .This confirms observation by Jinadu (2007) that more and more people, most especially the civil servants, rely heavily on their salaries to enable them purchase their dream houses.

**Table 4.5: Respondents' Ability to Pay from Other Sources of Income**

<b>Salary level</b>	<b>Ability to pay from other sources</b>	<b>Unable to pay from other sources</b>	<b>Total</b>
GL 1- 6	1(0.7%)	2(1.5%)	3(2.2%)
GL 7 - 10	12(8.9%)	42(31.1%)	54(40.0%)
GL 12 -14	19(14.1%)	52(38.5%)	71(52.6%)
GL 15 and Above	4(3.0%)	3(2.2%)	7(5.2%)
<b>TOTAL</b>	<b>36(26.7%)</b>	<b>99(73.3%)</b>	<b>135(100%)</b>

Source: Field survey, 2013

#### **4.4.4 Respondents' ability to complete repayment before the repayment period**

A comparative measure sought the opinion of respondents' ability to complete repayment or not before the repayment period as shown in table 4.6.

**Table 4.6: Respondent's Ability to Pay before the Repayment Period.**

<b>Salary</b>	<b>Able to cope within repayment period</b>	<b>Unable to cope with repayment period</b>	<b>Total</b>
GL 1- 6	1(0.7%)	2(1.5%)	3(2.2%)
GL 7 - 10	19(14.1%)	35(25.9%)	54(40.0%)
GL 12 -14	21(15.6%)	50(37.0%)	71(52.6%)
GL 15 and Above	5(3.7%)	2(1.5%)	7(5.2%)
<b>TOTAL</b>	<b>46(34.1%)</b>	<b>89(65.9%)</b>	<b>135(100%)</b>

Source: Field survey 2013

Table 4.6 indicates that large number 65.9% which covers mostly GL 12-14 (middle class) would be unable to repay their loan before the repayment period, only 34.1% would be able to cope with the repayment. This implies that majority of the allottees repayment of their loans will be throughout the repayment period.

#### **4.4.5 Level of satisfaction of the respondents in the scheme**

Respondents were asked the level of their satisfaction with the housing scheme. Responses obtained were shown in table 4.7.

**Table 4.7: Level of Satisfaction of The Respondents in The Scheme**

<b>Level of Satisfaction</b>	<b>Frequency</b>	<b>Percentage</b>
Fully satisfied	10	7.4
Satisfied	34	25.2
Partially satisfied	59	43.7
Unsatisfied	30	22.2
Very unsatisfied	2	1.5
<b>Total</b>	<b>135</b>	<b>100.0</b>

Source: Field survey 2013

Table 4.7 shows respondents rating on the overall feeling on the scheme, 43.7% are partially satisfied while respondent who are not satisfied are approximately 23.7%. However, the level of satisfaction is fair.

#### **4.4.6 Areas of dissatisfaction of the respondents in the scheme**

This sought the opinion of respondents on areas not satisfied upon as listed in table 4.8 with more than one option from respondents.

**Table 4.8: Areas of Dissatisfaction of the Respondents in the Scheme**

<b>Description</b>	<b>Frequency</b>	<b>Percentage</b>
Process of obtaining form to indicate interest in the house	33	24.4
Process of making down payment	45	33.3
Amount paid as down payment	25	18.5
Amount paid as monthly deductions	92	68.1

Source: Field survey 2013

The major problem as shown in above table is the monthly deduction which they are not satisfied with; 68.1% as most of them paid beyond 30% which is the affordability level. According to Andrews (1998), the 30 percent threshold is the most widely used and widely accepted indicator of affordability.

#### **4.4.7 Areas for improvement in the scheme.**

Respondents suggested areas to be improved upon in the scheme where some chose more than one option as in table 4.9.



**Table 4.9: Areas to Improve Upon in the Scheme.**

<b>Description</b>	<b>Frequency</b>	<b>Percent</b>
Design of the buildings	33	24.4
Infrastructures	45	33.3
Repayment period	95	70.4

Source: Field survey 2013

Table 4.9 indicates that majority of respondents expected improvement on repayment period while other areas include the design of building and infrastructures.

#### **4.5 Analysis of Respondents' Affordability of the Existing Repayment Schedule.**

The Niger State government repayment schedule for M.I.Wushishi Housing Estate on each Civil Servants allottee are flat rates, ₦10,000.00 and ₦19,000.00 for 2 and 3 bedroom houses respectively for 20 years. The respondent's monthly salary income of each category (GL 1-16) were analyzed to determine their affordability level and presented in table 4.10 and 4.11.

##### **4.5.1 Affordability of existing repayment of 2-Bedroom house type**

Table 4.10 revealed the affordability level of the respondents occupying 2-bedroom houses through monthly repayment schedule of 20 years after down payment 10% of housing cost at 6% interest rate.

**Table 4.10: Affordability of Existing Repayment of 2-bedroom House Type**

Salary grade level	Step	Gross Salary/Month (₦)	Repayment Amount/Month (₦)	Balance after deduction (₦)	% of Salary devoted to Mortgage	Remark
1	1	17,999.94	10,000.00	7,999.94	55.55	<b>NOT AFFORDABLE</b>
2	1	18,924.35	10,000.00	8,924.35	52.84	
3	1	19,166.11	10,000.00	9,166.11	52.18	
4	1	20,064.64	10,000.00	10,064.64	49.84	
5	1	21,698.45	10,000.00	11,698.45	46.09	
6	1	23,723.64	10,000.00	13,723.64	42.15	
7	1	26,008.80	10,000.00	16,008.80	38.45	
8	1	29,687.37	10,000.00	19,687.37	33.68	
9	1	32,633.53	10,000.00	22,633.53	30.64	
10	1	36,043.68	10,000.00	26,043.68	27.74	<b>AFFORDABLE</b>
12	1	40,253.43	10,000.00	30,253.43	24.84	
13	1	43,190.58	10,000.00	33,190.58	23.15	
14	1	46,394.65	10,000.00	36,394.65	21.55	
15	1	50,412.54	10,000.00	40,412.54	19.84	
16	1	54,400.38	10,000.00	44,400.38	18.38	

Source: Field survey 2013

Table 4.10 shows that Grade level 10-16 are within affordability level, GL 1-9 of the respondents cannot afford the repayment of ₦10, 000.00 per month for the 2- Bedroom house type .This is based on United Nation standard also adopted by National Housing Policy that household should not spend more than 30% of gross income on housing expenditure.

#### 4.5.2 Affordability of existing repayment of 3-bedroom house type

Repayment schedule of respondents occupying 3-bedroom houses were presented to know the affordability level after down payment of 10% of housing cost, as shown in table 4.11.

**Table 4.11: Affordability of Existing Repayment of 3-bedroom House type.**

Salary grade level	Step	Gross Salary/Month ₦	Repayment Amount/Month ₦	% of Salary devoted to Mortgage	Remark
1	1	17,999.94	19,000.00	105.55	<b>NOT AFFORDABLE</b>
2	1	18,924.35	19,000.00	100.40	
3	1	19,166.11	19,000.00	99.13	
4	1	20,064.64	19,000.00	94.69	
5	1	21,698.45	19,000.00	87.56	
6	1	23,723.64	19,000.00	80.09	
7	1	26,008.80	19,000.00	73.05	
8	1	29,687.37	19,000.00	64.00	
9	1	32,633.53	19,000.00	58.22	
10	1	36,043.68	19,000.00	52.71	
12	1	40,253.43	19,000.00	47.20	
13	1	43,190.58	19,000.00	43.99	
14	1	46,394.65	19,000.00	40.95	
15	1	50,412.54	19,000.00	37.69	
16	1	54,400.38	19,000.00	34.93	

Source: Field survey 2013

The result presented in Table 4.11 shows that all level of the allottees (100%) will be required to spend more than 30% of their salary income on housing, in order to access 3-bedroom houses at current repayment rates. In fact, workers on grade level 01 would spend 106% of their salary, while the highest paid civil servant GL 16 would spend 35% of their gross income.

#### **4.6 Mortgage Based Affordability Analysis**

A further test to determine if the repayment amount being charged by mortgage for the M.I.Wushishi Housing Estate (2 and 3 Bedrooms) were subsidized. The formula employed is the Mortgage Institutions' discounted cash flow techniques for computing monthly mortgage repayments over a given tenor and interest rate was used, as shown in equation 2 and a sample of the content is attached as Appendix V and VI. For the Housing scheme, repayment period is 20 years; interest rate of 6% per annum and 10% down payment of housing cost.

##### **4.6.1 Mortgage affordability analysis of 2-bedroom house type**

The analysis was carried out using equation 2 as mentioned above to determine the mortgage monthly repayment amount of 2-Bedroom house type after down payment in order to compare this with the existing repayment of the respondents.

For the 2-bedroom houses whose cost is ₦1,900,000.00 and down payment of ₦190,000.00 was calculated and the result shown below:

$$\text{Repayment/month}_{(R_m)} = \text{₦}12,243.60(2 - \text{Bedroom})$$

##### **4.6.2 Mortgage affordability analysis of 3-bedroom house type**

The analysis was used to determine the mortgage monthly repayment amount of 2-Bedroom house type after down payment using equation 2 in order to compare this with the existing repayment of the respondents. For the 3-bedroom house whose cost is

N2,900,000.00 and down payment of ₦ 290,000.00 was calculated and the result shown below.

$$\text{Repayment/month}_{(R_m)} = \text{₦}18,687.60(3 - \textit{Bedroom})$$

From these results, the actual mortgage repayment amounts are ₦18, 687.60 for the 3-bedroom and ₦ 12,243.60 for the 2-bedroom, instead of ₦19,000.00 and ₦10,000.00 being charged by the government. This means that the scheme is slightly subsidized for 2-bedroom house allocated to the allottees by ₦2, 243.60 but for the 3-bedroom house, there is no subsidy.

However, Niger State Gateway to Land and housing (NSGL&H,2007) revealed that the real challenge for government is to develop a housing delivery system that is effective and sustainable so that all income groups can have access to housing with little or no subsidy from government with the active participation of Public-Private Partnership (PPP).It is imperative to note that despite the slight subsidy per house, majority of the allottees cannot afford the houses.

#### **4.7 Improving the Affordability of the Housing Scheme**

To improve households affordability for housing services, this can be through three means or a combination of these.(Kolawole *et al.*,1998;Nelson,2002; Kofi,2008).The first is to extend the repayment period; the second is to reduce the cost of housing product and; the third is to lower the interest rate. All of these options are tested in this study.

#### 4.7.1 Extending the repayment period (Option 1)

The first proposal involves a differential scale of extending the repayment period. Allotees on GL 1-9 to repay their mortgage in 30 years while those on GL 10-16 to repay in 20 years as shown in Table 4.12.

**Table 4.12 Extending Repayment Period to 30 Years Through Mortgage.**

Salary grade level	Step	Gross Salary/month (₦)	Repayment Amount/ Month(₦)	% of Salary devoted to Mortgage	Repayment period	Remarks
1	1	17,999.94	7,500.00	41.66	30years repayment	<b>NOT AFFORDABLE</b>
2	1	18,924.35	7,500.00	39.63		
3	1	19,166.11	7,500.00	39.13		
4	1	20,064.64	7,500.00	37.38		
5	1	21,698.45	7,500.00	34.56		
6	1	23,723.64	7,500.00	31.61		
7	1	26,008.80	7,500.00	28.84		
8	1	29,687.37	7,500.00	25.26		
9	1	32,633.53	7,500.00	22.98		
10	1	36,043.68	10,000.00	27.74	20-years repayment	<b>AFFORDABLE</b>
12	1	40,253.43	10,000.00	24.84		
13	1	43,190.58	10,000.00	23.15		
14	1	46,394.65	10,000.00	21.55		
15	1	50,412.54	10,000.00	19.84		
16	1	54,400.38	10,000.00	18.38		

Source: Field Survey 2013

Table 4.12 reveals monthly repayments for Grade Level 1-6 still exceed 30% of gross salary for the 2-bedroom bungalow. It is important to note that Grade level 7-9 repayment of ₦7, 500.00 cannot meet the repayment amount under mortgage even

though it is within affordability level. If the repayment period is extended to 30 years the allottee would have to pay a minimum of ₦10,000.00. Samples of the contents are attached as Appendix VI and VII.

#### 4.7.2 Reducing cost of the houses (Option 2)

The designs of these two houses were presented to a value specialist to conduct value analysis with a view to eliminating unnecessary cost. The outcome of the value study puts the worth of the two houses at ₦1,200,000.00 and ₦2,000,000.00 for the 2-bedroom and 3-bedroom respectively without any subsidy from government. A sample of the content is attached as Appendix VIII using only 2-bedroom house. Table 4.13 shows the repayment amount for all categories of civil servants (GL 1-16) under the three repayment periods of 20years, 22years and 25 years after the down payment of 10% by each beneficiary at 6% interest rate.

**Table 4.13 Repayment Amounts (Different Tenor) for the 2-Bedroom Houses worth ₦1,200,000.00 only with varying Repayment Period**

Grade Level	Monthly Repayment Amounts for 2-bedroom house type @ ₦ 1,200,000.00			
	Tenor:	20yrs	22years	25years
1-16	Monthly Repayment Amounts	₦7,732.80	₦7,376.4	₦6,955.20

Source: Field Survey 2013

This option improved the affordability and thus increasing those who can afford this house up to Grade level 6 to 9. Respondents on Grade level 1-5 cannot meet with affordability amount of ₦5, 130.00 to ₦6,500.00 respectively per month. A sample of the content is attached as appendix VIII.

### 4.7.3 Lowering the interest rate for houses allocated to respondents (Option 3)

This option requires state government negotiation with the Mortgage on 2-bedroom house type. The house balance is ₦1.710M after the down payment of 10% at 6% interest rate. This study suggest three options 2%, 3% and 4% interest rates over various repayment periods.

**Table 4.14 Improving Affordability through varying Repayment periods and interest rates.**

Repayment Period	Percentage Interest/Amount(₦/M)		
	4	3	2
20years	10,326.69	9,483.62	8,650.61
22 years	9,750.10	8,856.01	8,019.90
25 years	9,026.01	8,109.01	7,247.91
30 years	8,163.80	7,209.43	6,320.49

Source: Field survey 2013

Table 4.14 revealed that by reducing mortgage interest rate to 2% in 30years for respondents in 2-bedroom, this will improve repayment for those on Grade level 5-9. However, those on Grade level 1-4 are still at disadvantage despite reducing interest rates and extending repayment period. A sample of the content is attached as Appendix VIII.



#### 4.8 Analysis Using Combination of Three Options.

A further analysis was carried out to test the affordability of the respondents. The combination of three options (extending repayment period, reducing housing cost and lowering interest rate) were used. Extending repayment period to between 20 to 30 years, the housing cost to N1.080M after down payment of 10% and mortgage interest rate to between 2 to 4%. Table 4.15 shows the result.

**Table 4.15: Improving Affordability through reduced housing cost and varying Repayment periods and Interest rates.**

Repayment Period	Percentage Interest/Amount(₦/M)		
	4	3	2
20years	6544.59	5989.65	4944.03
22 years	6,157.96	5,593.27	5,081.08
25 years	5,700.64	<b>5,121.48</b>	4,557.63
30 years	5,156.09	4,553.32	3991.89

Source:Field Survey 2013

Table 4.15 shows that option 2 (reducing housing cost) and reducing interest rate to not more than 3% with extending the repayment period to not more than 25 years, all level of workers can afford these repayment plan which is **₦5,121.48** since the allotees lowest affordable cost is **₦5,399.98**. A sample of the content is attached as Appendix VIII.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of Major Findings

Based on the information gathered from literature and the analysis carried out in previous chapters, the findings of the study are summarized as follow:

1. The study revealed that the Public housing development in Niger State witnessed steady increase of activities between 1976-1982 but the overall achievement up to 2007 was less than 3,000 units which led to PPP housing development which was introduced in 2007 and have achieved 1500units up to 2012 (Fig.2).
2. The population of respondents with between 5 to less than 15 years in service and having 20-40 years of age are the major beneficiaries of the housing allocated with the repayment period of 20 years.
3. Most respondents belong to middle working class .Thus, Niger State Policy & Operational Guideline for Public – Private Partnership (2007) stated that the aim of the government is to enable low and medium income workers to own affordable houses on owner-occupier basis.
4. The respondents preferred houses they could afford, between ₦1.5 to ₦1.99M and ₦2.45M to ₦2.99M for 2 and 3 bedroom houses respectively. Also, most of the respondents cannot cope with repayment from other sources and before repayment

periods. The respondents were partially satisfied, where area of dissatisfaction is majorly on amount paid as monthly deductions 68.1% and area to be improved upon mostly is repayment period, design of buildings and infrastructures.

- 5 In term of affordability, the study disclosed that all respondents in 3-bedroom could not afford houses allocated to them, while those in 2-bedrooms in GL 01-9 also exceeded affordability level even when the repayment was extended to 30years. Only Grade level 10-16 could afford the repayment in 20 years. As stated by 1992 National Housing Strategy that affordable housing should not be more than 30% of salary income to meet affordability. This shows partial satisfaction especially on the repayment schedule.
6. Affordability analysis of the mortgage scheme shows monthly repayment of ₦18,687.60 and ₦12,243.60 for 3 and 2 bedrooms respectively compared to ₦19,000.00 and ₦10,000.00 arrived at by the State government at interest rate of 6% in 20years.
7. The repayment through mortgage is difficult for certain categories of workers especially Grade level 1-9, this led to three options suggested for improving their affordability. The first proposal, extending repayment period of respondents on Grade level 1-9 up to 30years for 2- bedroom, yet cannot meet with the repayment while the second proposal of reducing housing cost to ₦1.2M for 2 bedroom house not even affordable to GL 1-5. The last option of reducing the mortgage interest rate to 3% in 25 years still did not make the house affordable for GL 1-4.
8. A further analysis of combination of the three options (as mentioned in 6 above) used, met affordability of all level of workers.

## 5.2 Conclusions

Based on the findings of this research, the following conclusions were arrived at;

1. Public – Private Partnership (PPP) has improved housing development in Niger State and Nigeria in general within a shorter period of time than government housing development (Public sector). Akeju (2007) stated that government alone cannot fill the housing gap, we would have to leverage on the resources available in private sector in order to fill the gap.
2. Most of the Public sector beneficiaries are between 20- 40years of age and still have more than 20years in services this shows that majority of the allottees can be able to pay before the repayment period and retirement mostly middle class category.
3. All allottees in 3-bedroom houses cannot cope with the repayment plan and some allottees in 2-bedroom, Grade Level (GL) 10-16 can afford the repayment plan with the aid of government subsidy which are mostly middle class while GL1-9 exceeded the affordability level led to allottees not satisfied with the repayment.
4. From the three options; Reducing housing cost and mortgage interest rate, would improve the repayment plan while extension of repayment period may not improve the affordability for the beneficiaries.
5. Combination of the three options(as mentioned in 4 above) can be used to further improve the product to all categories of workers.

### **5.3 Recommendations**

Based on the results obtained from the study the following recommendations were made with the view for enhancing housing affordability for Niger State Civil Servants.

1. The adoption of PPP in provision of housing should continue since government alone cannot handle the provision of housing, future development should be concentrated on 2-bedroom housing with adequate provision of Land and infrastructures for the developer as a contribution towards the scheme.
2. Government should increase salary income in order to improve the affordability level of workers and GL 1-4 should be assisted on their repayment, since they cannot meet with the three options.
3. Reducing cost of houses and the mortgage interest rate (Options 2 and 3) should be adopted in order to achieve replication of houses so that civil servants who have not benefitted can have opportunity to do so. In addition, the combination of three options should be used in order to carry all workers along.
4. Social housing should be adopted where government cannot meet the affordability of GL1-4 for the future allottees as Social housing has not been fully implemented in Nigeria.
5. Government should continue to explore the possibility of paying for the consultancy services of allocation processes in order to assist the allottees of additional expenses to the housing cost.

#### **5.4 Areas For Further Research**

1. Exploration of strategy by the government on how to make appropriate repayment plan for each category of workers
2. Development of strategy for alternative affordable housing provision (social housing) for low income earners.

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## Appendix 1

### SAMPLE OF QUESTIONNAIRE USED IN OBTAINING DATA

#### DEPARTMENT OF BUILDING

#### FACULTY OF ENVIRONMENTAL DESIGN,

#### AHMADU BELLO UNIVERSITY, ZARIA.

### **An Evaluation of Housing Affordability for Niger State Civil Servants under Public- Private Partnership (PPP) Housing Development.**

#### QUESTIONNAIRE

Dear Respondent,

This questionnaire is a part of a Master of Science degree in Construction Management thesis to be submitted to the Department of Building, Ahmadu Bello University, Zaria, Kaduna State. It is designed to obtain relevant information from Civil Servants allotees in M.I.Wushishi Housing Estate, Minna. It is part of a study on **Housing Affordability for Niger State Civil Servants under Public- Private Partnership (PPP) Housing development** with a view to determining the repayment schedule of civil servant from their salary income in Niger State. Your participation in this survey is crucial to the success of this research. The information you provide will be kept in outmost confidentiality and shall be used strictly for academic purposes.

Thank you

---

Abdullahi Madinat .S.

**PART I**

**SECTION A: Respondents' Profile.**

Please choose from among the options supplied for each of the following by ticking in front of any of the capital alphabetical letters that expresses your choice.

1. How old are you when you joined the service?

A. 18 -20 years	<input type="checkbox"/>	B. 20 – 30 years	<input type="checkbox"/>	C.30–40 years	<input type="checkbox"/>	D. 50 years	<input type="checkbox"/>	E. 50years & Above	<input type="checkbox"/>
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2. How long have you been in service?

A.Less than 5years	<input type="checkbox"/>	B.5-10 years	<input type="checkbox"/>	C=10- 15years	<input type="checkbox"/>	D=15- 20years	<input type="checkbox"/>	E.20- 30years	<input type="checkbox"/>
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3. Indicate your Salary Grade level.

A. GL. 1-6	<input type="checkbox"/>	B. GL. 7-10	<input type="checkbox"/>	C. GL. 12-14	<input type="checkbox"/>	D. 15&Above	<input type="checkbox"/>
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**Section B: Assessment of the Affordability of PPP Housing to Niger State Civil Servants.**

1. What type of house is allocated to you?.

A.Two(2)Bedroom	<input type="checkbox"/>	B. Three(3)Bedroom	<input type="checkbox"/>
-----------------	--------------------------	--------------------	--------------------------

2. Can you pay for the house apart from your salary income?

A=Yes	<input type="checkbox"/>	B=No	<input type="checkbox"/>
-------	--------------------------	------	--------------------------

3. Can you pay for the house before the repayment period?

A=Yes	<input type="checkbox"/>	B=No	<input type="checkbox"/>
-------	--------------------------	------	--------------------------

4. In your own view, how much you can afford to pay for the house?

A ₦1.50- ₦1.99M	<input type="checkbox"/>	B ₦2.00- ₦2.49M	<input type="checkbox"/>	C ₦ 2.5- ₦ 2.99M	<input type="checkbox"/>	D ₦ 3.0- ₦ 3.39M	<input type="checkbox"/>	E ₦3.4M- ₦3.80M	<input type="checkbox"/>
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5. How satisfied are you with the scheme?

A-Fully Satisfied	<input type="checkbox"/>	B-Satisfied	<input type="checkbox"/>	C-Partially Satisfied	<input type="checkbox"/>	D- Unsatisfied	<input type="checkbox"/>	E-Very Unsatisfied	<input type="checkbox"/>
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6. Please indicate what aspect of the allocation you were not satisfied with in order to improve the housing affordability

- a. Process of obtaining form to indicate interest in the house
- b. Process of making a down payment.
- c. What of the amount paid as down payment
- d. What of the amount paid as monthly deductions

7. What did you suggest should be improved in this scheme?.

a. Design of the buildings

b. Infrastructures

c. Repayment Period



## Appendix II

### SAMPLE OF THE INTERVIEW QUESTIONS AND RESPONSES

#### Data Collection: Interview

**TITLE:** An Evaluation of Housing Affordability for Niger State Civil Servant under Public- Private Partnership (PPP) Housing Development

Questions	Responses
What is the contribution of the government to the Private housing developer (PPP) in terms of Lands and Infrastructures (Roads, Electricity, Water and Drainages) for the beneficiaries	There is provision of Land and infrastructures for the beneficiaries.
What are the criteria for Civil Servant in applying for the houses, e.g category of worker ?	The provision is for all categories.
Who are the parties involved in allocation, for example consultant ?	Estate Surveyor Consultant is involved in the allocation process
Is there any loan benefitted by the allottees from Primary Mortgage Institution (PMI)/the Federal Mortgage Bank of Nigeria (FMBN)?	Every Niger State civil service allottees are beneficiaries
If any, what is the percentage interest charged for the service?	6% interest
Is there any provision for continuity in the Public-Private Partnership (PPP) housing programme that will enhance affordability to Civil Servants in Niger State?	Yes. There is provision for continuity.

Source: Field survey 2013

### Appendix III

#### SAMPLE OF CHECKLIST USED IN OBTAINING DATA

**DATA COLLECTION:** CHECKLIST

**MSC THESIS:** CONSTRUCTION MANAGEMENT

**TITLE:** AN EVALUATION OF HOUSING AFFORDABILITY FOR NIGER STATE (N/S) CIVIL SERVANTS UNDER PUBLIC- PRIVATE PARTNERSHIP (PPP) HOUSING DEVELOPMENT.

No of Houses Constructed		No of Houses Allocated To N/S Civil Servants		Cost of Houses		Repayment Amount Per Month		Period of Repayment	
2-Bedroom Semi-Detached Bungalow	3-Bedroom Detached Bungalow	2-Bedroom Semi-Detached Bungalow	3-Bedroom Detached Bungalow	2-Bedroom Semi-Detached Bungalow	3-Bedroom Detached Bungalow	2-Bedroom Semi-Detached Bungalow	3-Bedroom Detached Bungalow	2-Bedroom Semi-Detached Bungalow	3-Bedroom Detached Bungalow
400 Units	100 Units	265 Units	85 Units	₦1.90M	₦2.90M	₦10,000.00	₦19,000.00	20 years	20 years

Source: Field Survey 2013

**APPENDIX IV**

**NIGER STATE PROPOSED CONSOLIDATED PUBLIC SERVICE SALARY STRUCTURE(CONPSS)**

<b>GRADE LEVEL/ STEP</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>
<b>01</b>	17,999.94	18,189.14	18,279.94	18,428.94	18,839.74	18,705.94	18,839.94	18,979.04	19,119.94	19,259.94	19,399.94	19,539.94	19,679.94	19,959.94
<b>02</b>	18,924.35	19,112.55	19,300.75	19,488.99	19,677.15	19,855.35	20,052.35	20,241.71	20,429.95	20,618.15	20,506.35	20,994.55	22,152.75	22,559.15
<b>03</b>	19,166.11	19,397.22	19,625.22	19,999.11	20,290.02	20,321.11	20,552.11	20,783.11	21,014.11	21,245.11	21,476.11	21,707.21	21,938.11	22,169.11
<b>04</b>	20,064.64	20,342.24	20,629.64	20,897.14	21,174.64	21,452.14	21,725.64	22,007.14	22,254.54	22,502.14	22,535.54	23,117.14	23,394.64	23,672.14
<b>05</b>	21,698.45	22,020.95	22,343.45	22,555.95	22,968.45	23,310.95	23,633.45	23,955.95	24,175.45	24,600.55	24,923.45	25,245.95	25,563.45	25,890.95
<b>06</b>	23,723.64	24,116.61	24,509.54	24,902.54	25,293.64	25,658.64	26,081.64	26,474.64	26,857.64	27,260.64	27,658.64	28,046.64	28,439.64	28,832.64
<b>07</b>	26,008.80	26,453.30	26,977.50	27,462.30	27,946.50	28,411.30	28,915.80	29,400.30	29,854.50	30,363.30	30,953.50	31,339.30	31,822.80	32,307.30
<b>08</b>	29,687.37	30,260.27	30,832.97	31,405.67	31,978.37	32,551.07	33,123.77	33,695.47	34,269.17	34,341.67	35,434.57	35,957.27	36,559.97	37,121.97
<b>09</b>	32,633.53	33,325.43	33,997.33	34,679.23	35,362.13	36,043.03	36,724.93	37,406.83	38,088.73	38,770.63	39,432.55	40,134.43	40,516.33	41,498.13
<b>10</b>	36,043.68	36,753.45	37,343.28	38,255.08	39,042.58	39,792.65	40,342.45	41,292.28	42,041.08	42,751.68	43,541.68	44,291.48	45,041.18	45,791.05
<b>12</b>	40,253.43	42,425.93	42,604.43	43,779.93	44,955.43	46,150.93	47,305.43	48,481.93	49,657.43	50,832.93	52,005.43			
<b>13</b>	43,190.58	44,433.45	45,676.38	46,915.28	48,162.15	49,405.05	50,647.98	51,590.58	53,133.75	54,376.55	55,619.58			
<b>14</b>	46,394.65	47,732.75	49,070.35	50,408.95	51,747.05	53,095.15	54,423.25	55,762.85	57,099.45	59,437.55	59,775.65			
<b>15</b>	50,412.54	52,189.34	53,966.54	55,743.54	57,320.54	59,117.04	62,074.34	62,95.54	64,615.54					
<b>16</b>	54,400.38	56,535.88	58,671.35	60,505.38	62,941.33	65,977.85	80,655.65	82,790.85	82,926.15					

## Appendix V

### Mortgage Repayment Amount for Allocated 2 and 3 Bedroom Houses (M.I.Wushishi Estate).

For the housing scheme, repayment period is 20 years; interest rate of 6% per annum and 10% down payment of housing cost. Therefore:

For the 3-bedroom house whose cost is ₦2,900,000.00; and down payment of ₦290,000.00 was calculated below as;

$$R_m = P \left[ \frac{\left(1 + \frac{6}{1200}\right)^{240} \frac{6}{1200}}{\left(1 + \frac{6}{1200}\right)^{240} - 1} \right]$$

$$P = ₦2,900,000 - ₦290,000 = ₦2,610,000$$

$$= 2610000 \left[ \frac{(1.005)^{240} \times 0.005}{(1.005)^{240} - 1} \right]$$

$$= 2610000 \left[ \frac{3.3102 \times 0.005}{3.3102 - 1} \right]$$

$$= 2610000 \left[ \frac{0.01655}{2.3102} \right]$$

$$= 2610000(0.00716)$$

$$\text{Repayment/month}_{(R_m)} = ₦18,687.60(3 - \text{Bedroom})$$

For the 2-bedroom houses whose cost is ₦1,900,000.00 and down payment is ₦190,000.00 was calculated below as;

$$R_m = P \left[ \frac{\left(1 + \frac{6}{1200}\right)^{240} \frac{6}{1200}}{\left(1 + \frac{6}{1200}\right)^{240} - 1} \right]$$

$$P = ₦1900000 - ₦190000 = ₦1710000$$

$$= \text{N}1710000 \left[ \frac{(1.005)^{240} \times 0.005}{(1.005)^{240} - 1} \right]$$

$$= \text{N}1710000 \left[ \frac{3.3102 \times 0.005}{3.3102 - 1} \right]$$

$$= 1710000 \left[ \frac{0.016551}{2.3102} \right]$$

$$= \text{N}1710000(0.00716)$$

$$\text{Repayment/month}_{(R_m)} = \text{N}12,243.60(2 - \text{Bedroom})$$

## Appendix VI

### Repayment Amounts and Repayment periods of 22 years, 25years and 30 years by the Respondents through mortgage.

Grade Level	Monthly Repayment Amounts for Existing 2-bedroom house type			
	Tenor:	22years	25years	30years
1-16	Monthly Repayment amounts	₦11,679.30	₦11,012.00	₦10,253.16

Source: Field survey 2013

## Appendix VII

### FMBN's Loan Affordability Table for the NHF Contributors

<b>FEDERAL MORTGAGE BANK OF NIGERIA</b>						
AFFORDABILITY TABLE ON THE NATIONAL HOUSING FUND(NHF)						
REPAYMENT PLANS AT SIX(6)% INTEREST						
Refund :Years	5	10	15	20	25	30
Amount taken as loan (₦)	Monthly Loan Repayment (₦)	Monthly Loan Repayment (₦)	Monthly Loan Repayment (₦)	Monthly Loan Repayment (₦)	Monthly Loan Repayment (₦)	Monthly Loan Repayment (₦)
50,000	966.64	555.10	421.93	358.22	322.15	299.78
100,000.00	1,933.28	1,110.21	843.86	716.43	644.30	599.55
250,000.00	4,833.20	2,775.51	2,109.64	1,791.08	1,610.75	1,498.88
500,000.00	9,666.40	5,551.03	4,219.28	3,582.16	3,221.51	2,997.75
750,000.00	14,499.60	8,436.57	6,328.93	5,372.23	4,832.26	4,496.63
1,000,000.00	19,332.80	11,102.05	8,436.57	7,164.31	6,443.01	5,995.51
1,250,000.00	24,166.00	13,877.56	10,548.21	8,955.39	8,053.77	7,494.38
1,500,000.00	28,999.20	16,653.08	12,657.85	10,746.47	9,664.52	8,993.26
1,750,000.00	33,832.40	19,428.59	14,767.49	12,537.54	11,275.27	10,492.13
2,000,000.00	38,665.60	22,204.10	16,877.14	14,328.62	12,886.03	11,991.01
2,250,000.00	43,498.80	24,979.61	18,986.78	16,119.70	14,496.78	13,489.89
2,500,000.00	48,332.00	27,775.13	21,096.42	17,910.78	16,107.54	13,988.76
2,750,000.00	53,165.20	30,530.64	23,206.06	19,701.85	17,718.29	16,487.64
3,000,000.00	57,998.40	33,306.15	25,315.70	21,492.93	19,329.04	17,986.52
3,250,000.00	62,831.60	36,081.66	27,425.35	23,284.01	20,939.80	19,485.39
3,500,000.00	67,664.81	38,857.18	29,534.99	25,075.08	22,550.55	20,984.27
3,750,000.00	72,498.01	41,632.69	31,644.63	26,866.16	24,161.30	22,483.14
4,000,000.00	77,331.21	44,408.20	33,754.27	28,657.24	25,772.06	23,982.02
4,250,000.00	82,164.41	47,183.71	35,863.92	30,448.32	27,382.81	25,480.90
4,500,000.00	86,997.61	49,959.23	37,973.56	32,239.40	28,993.56	26,979.77
4,750,000.00	91,830.81	52,734.74	40,083.20	34,030.48	30,604.32	28,478.65
5,000,000.00	96,664.01	55,510.25	42,192.84	35,821.55	32,215.07	29,977.53
<p>1. NHF-Affordability is limited to the amount that one-third of the monthly income can service as monthly loan repayment</p> <p>2. For loan Eligibility- Divide monthly income by three (as not more than one –third Borrower's income can be devoted to the loan repayment ) and then divide the answer by the repayment factor of the chosen repayment period(as shown in repayment table).</p>						

Source: The FMBN, Abuja, Nigeria, 2008.

## Appendix VIII

### Affordability Level of each Respondent through Salary Income

<b>Salary grade level</b>	<b>Step</b>	<b>Gross Salary/month ₱</b>	<b>Deduction of 30% /Month ₱</b>
1	1	17,999.94	<b>5,399.98</b>
2	1	18,924.35	<b>5,677.31</b>
3	1	19,166.11	<b>5,749.83</b>
4	1	20,064.64	<b>6,019.39</b>
5	1	21,698.45	<b>6,509.54</b>
6	1	23,723.64	<b>7,117.09</b>
7	1	26,008.80	<b>7,802.64</b>
8	1	29,687.37	<b>8,906.21</b>
9	1	32,633.53	<b>9,790.06</b>
10	1	36,043.68	<b>10,813.10</b>
12	1	40,253.43	<b>12,076.03</b>
13	1	43,190.58	<b>12,957.17</b>
14	1	46,394.65	<b>13,918.40</b>
15	1	50,412.54	<b>15,123.76</b>
16	1	54,400.38	<b>16,320.11</b>

Source: Field survey 2013



## Appendix IX

### Ministry Lands and Housing (Residential Buildings) 1979-2012.

<b>Project Name</b>	<b>Types of building</b>	<b>Period of Construction</b>	<b>No. of Units</b>	<b>Locations</b>	<b>Method of allocation</b>
<b>Junior Staff Quarters</b>	2 Bedroom Bungalow	1976-1977	164	Minna	Owner Occupier - basis
<b>Intermediate Quaters</b>	3 Bedroom Bungalow	1976-1977	256	Minna	Owner Occupier - basis
<b>Type 'A' Quaters</b>	4 Bedroom Bungalow with 2 Bedroom BQ	1978-1979	50	Minna	Owner Occupier - basis
<b>Type 'B' Quaters</b>	6 Bedroom Bungalow with 2 Bedroom BQ	1977-1978	30	Minna	
<b>Senior Staff Quarters Bosso</b>		1980- 1981	35	Minna	Owner Occupier - basis
<b>Low-cost Housing (Bosso Low- cost)</b>	2&3 Bedroom	1979-1981	200	Minna	Owner Occupier - basis
<b>Low-cost Housing</b>	2&3 Bedroom	1976-1977	100	Bida	Owner Occupier - basis
<b>Low-cost Housing</b>	2&3 Bedroom	1976-1977	100	Kontagora	Owner Occupier - basis
<b>Low-cost Housing</b>	2&3 Bedroom	1976-1977	50	Suleja	Owner Occupier - basis
<b>Low-cost Housing</b>	2&3 Bedroom	1976-1977	50	Kagara	Owner Occupier - basis
<b>Low-cost Housing</b>	2&3 Bedroom	1976-1977	50	Rijau	Owner Occupier basis.
<b>Low- cost Housing</b>	2&3 Bedroom	1976-1977	50	New-Bussa	Owner Occupier basis

<b>Low- cost Housing</b>	2&3 Bedroom	1976-1977	25	Kutigi	Owner Occupier basis
<b>Total No of Unit</b>			<b>1190</b>		

**Source:** Niger State Ministry of Land and Housing (2012)

## Appendix X

### Niger State Housing Corporation (Residential Buildings) 1979-2012.

<b>Types of building</b>	<b>Period of Construction</b>	<b>No. of Units</b>	<b>Locations</b>	<b>Number completed</b>	<b>Method of allocation</b>	<b>Type of Procurement</b>
<b>2&amp;3Bedroom Bungalow</b>	1979-1999	538	Minna	100%	Owner-Occupier basis	Direct Labour, Traditional
<b>Ditto</b>	2000-2007	316	Minna, Suleja	100%	Ditto	Direct Labour, Traditional,
<b>Total</b>		<b>854 Units</b>				
<b>M.I. Wushishi Housing Estate (2&amp;3bedroom Bungalow)</b>	2007-2009	500	Minna	500 Units	Owner-Occupier basis	PPP
<b>TalbaHousing Estate (2&amp;3Bedroom Bungalow)</b>	2008-Date	500	Minna	On-going70% completion	Ditto	PPP
<b>Sani Bello HousingEstate (2&amp;3Bedroom Bungalow)</b>	2009-Date	250	Kontagora	On-going 80% completion	Ditto	PPP
<b>Shehu Musa Housing Estate 2&amp;3Bedroom Bungalow</b>	2009-Date	250	Bida	On-going 80% completion	Ditto	PPP
<b>TOTAL</b>		<b>1500 Units</b>				

Source: Niger State Housing Corporation 2013

## Appendix XI

### Federal Ministry of Lands, Housing and Urban Development (Residential Buildings) from 1979-2012

Types of building	Period of Construction	No. of Units proposed	Locations	Number completed	Method of allocation	Type of Procurement
Shagari Federal Low-Cost(1-Bedroom Bungalow)	1979-1981	300	Minna	100%	Owner-Occupier basis	
Ditto 2- Bedroom Bungalow	Ditto	146	Minna	Some completed while some sold at various level of completion.	Ditto	
Ditto 3- Bedroom Bungalow	Ditto	142	Minna	100%		
Ditto 1 &2 Bedroom Bungalow	Ditto	954	Bida and Kontagora	Some completed while some sold at various level of completion.	Owner-Occupier basis	
Ditto 1 -Bedroom Bungalow	Ditto	440	Suleja,Rijau, Babanna	Ditto	Ditto	
Ditto 1 &2 Bedroom Bungalow	Ditto		Agai,Lapai Kagara and kutigi	Ditto	Ditto	
Ditto 1 &3Bedroom Bungalow	Ditto	50	New –Bussa	Ditto	Ditto	
Bosso Housing Estate(2&3Bedroom Bungalow)	1989-1990	260	Bosso-Minna	100%	Ditto	Federal Housing Authority
<b>TOTAL</b>						
2&3Bedroom Bungalow	2008-Date	300	Minna	75 Units -40%.		PPP
4-Bedroom Bungalow	2010-Date	4	Minna	100%		PPP
4-Bedroom Bungalow(Semi-Detached)	2010-Date	2	Minna	1unit completed, 1 unit at DPC Level.		PPP
2&3Bedroom Bungalow	2011-Date	100	Minna	55 Units -50%.		PPP

**Source:** Federal Ministry of Lands, Housing and Urban Development, Minna (2012)

## Appendix XII

### Some Residential Housing Development Projects through PPP in Nigeria.

<b>Housing Projects executed by HFP Engineering Nigeria Ltd(one of the Multinational foreign construction companies in Nigeria).</b>		
<b>No of units</b>	<b>Types of building</b>	<b>Client</b>
4	Units of accommodation for ratings	Ministry of Defence (Navy)
108	One-bedroom units	Ministry of Defence (Navy)
36	Two-bedroom units	Ministry of Defence (Navy)
80	Three bedroom units	Ministry of Defence (Navy)
24	Four-bedroom units	Ministry of Defence (Navy)
14	Four-bedroom units	Ministry of Defence (Navy)
2	Five-bedroom	Ministry of Defence (Navy)
16	Domestic quarters	Ministry of Defence (Navy)
1	Bachelor officers quarters	Ministry of Defence (Navy)
620	Dolphin estate Phase 1	Ministry of Defence (Navy)
136	Dolphin estate Phase II	Ministry of Defence (Navy)
138	Three-bedroom flats	Ministry of Defence (Navy)
216	Units of duplexes	Lagos state Government
6	Dany estate of detached five-bedroom	HFP
32	Four-bedroom duplexes	HFP
1434	High income units, Victoria Garden estate	HFP

Source: UN-HABITAT, 2002 IN Daramola *et al.*



**PLATE I: FRONT VIEW OF M. I. WUSHISHI HOUSING ESTATE MINNA**





**PLATE III: SEMI-DETACHED TWO BEDROOM BUNGALOW AT M.I. WUSHISHI HOUSING ESTATE MINNA**