PERFORMANCE EVALUATION OF STATE SUBSIDIZED HOUSING SCHEME: A CASE STUDY OF OGUN STATE HOUSING PROJECTS

A PhD Thesis

By

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DECLARATION

I, Ogunde, Ayodeji Olubunmi declare that the work referred to in this thesis was carried out entirely by me under the supervision of Dr.O.I Fagbenle (Main Supervisor) and Prof. Tim. O. Mosaku (Co-Supervisor) both of the Department of Building Technology, Covenant University, Canaan- Land, Ota, Ogun State. Therefore, no portion of the thesis has been submitted in support of an application for another degree or qualification of this or any other University or other institution of learning. All sources of scholarly information referred to in this thesis were properly acknowledged.

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CERTIFICATION

This thesis entitled Performance Evaluation of State Subsidized Housing Scheme: A Case Study of Ogun State Housing Projects carried out by Ogunde, Ayodeji Olubunmi under my supervision meets the regulations governing the award of the degree of Doctor of Philosophy (Ph.D) in Construction Management of the Covenant University, Ota, Ogun State, Nigeria. I certify that it has not been submitted in part or full for the award of the degree of Ph.D or any other degree in this or any other University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This thesis is dedicated to Almighty God for granting me the grace to start and complete this project successfully. To God alone be the glory.

It is also dedicated to my late parents Mr. and Mrs. M.O. Ogunde of blessed memory.

My lovely wife, Omotola,

My wonderful children, Abisola and Olufunke Ogunde.

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Abstract

The problems of housing in Nigeria are enormous and complex, exhibiting apparent and marked regional differences. In most urban centres, the problem is not only restricted to quantity but also to the quality of available housing units and the environment. This study therefore evaluated the building performance of State Subsidized Housing Schemes in Ogun State and ascertained whether or not the public housing estates fulfil the initial design/goal of government and the needs of the users with regard to the occupants` satisfaction. The objectives of the study were to examine housing delivery process, evaluate the physical characteristics and conditions of the housing units, examine the socio-economic characteristics of the residents, ascertain factors which influence levels of residents' expectations and satisfaction with the housing estates and compare the occupants` expectations of the housing units, with their housing experience in the estates.

The study obtained both primary and secondary data. Qualitative data was obtained from key management staff of (OPIC) by means of in-depth interview. Quantitative data was obtained through administration of questionnaires on 716 housing units based on purposeful sampling of ten existing low-income housing estates spread across the State. Descriptive and inferential techniques were used for the analysis.

The result of study showed a positive and significant correlation between age range (r=0.397), marital status (r=0.297), and household size (r=0.189), however, Socio economic status (r=-0.275), educational attainment (r=-0.213) and ownership status (r= -0.285) had negative, but significant correlations at 0.05 level of significance. The study concluded that most residents found their housing units satisfactory but at different levels of satisfaction based on the age, length of residency, marital status and educational level. It is thus recommended that public agencies for low-income housing should pay proper

attention to the management of support and public facilities to enhance residential satisfaction of the inhabitants and also adopt a policy to build different sizes of units to cater for the needs of the residents with large families in order to enhance quality of life of the low-income urban community in the country.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Housing has been universally accepted as the second most important essential human need, after food. Housing, in all its ramifications, is more than mere shelter since it embraces all the social services and utilities that go to make a community or neighbourhood a liveable environment (Federal Republic of Nigeria, 1985, 1991(a), 2001, 2006 and Agbola, 1998). It plays a crucial role in integrated physical and economic development, environmental sustainability, natural disaster mitigation and employment generation as well as wealth creation (Erguden, 2001; Boehm and Schlottmann, 2001; UN-HABITAT, 2006a). On the other hand, Mabogunje, Hardoy and Misra (1978), stated that shelter unlike other basic needs such as food, clothing which man obtains from nature, leaves the most visible impact on the built environment. Ilesanmi (2005) emphasised that housing fulfils physical, psychological social, economic, and political roles. In physical terms, housing is a basic need of human beings for shelter or protection from weather elements, as well as from hostile intruders. Housing is invested with profound psychological and social significance, as a centre of privacy, and a place of interaction with other members of the household, friends, and acquaintances. In

economic terms, housing constitutes a major financial investment and therefore a vital aspect of the economy.

The problems of housing in Nigeria are enormous and complex, exhibiting apparent and marked regional differences. In most of the urban centres, the problem is not only restricted to quantity but also to the quality of available housing units and environment. The result is manifested in growing overcrowding in homes, neighbourhoods and communities, and increasing pressure on infrastructure facilities and rapidly deteriorating environment (Federal Government of Nigeria, 2006).

Housing developments not only provide structures to live in but are supposed to address other aspects of housing as well. This includes the provision of services, schools, community halls and economic opportunities. These aspects support a community's move to a new housing environment. If possible, the transition to the new environment should be easy with no disruptions in the lives of the people who move there. Besides the evaluation of the housing units itself, the evaluation of housing estates should include other aspects of housing development, community and environment as well. This will indicate whether the needs and expectations of occupants have been met (Darkwa, 2006).

The housing policy of the Federal Government of Nigeria States stipulates that the interested citizen should have access to decent, safe and healthy accommodation at affordable cost. The Nigerian Housing Policy also sets standards for State delivered housing that should be met by developers and designers (Federal Government of Nigeria, 2006). State Governments in Nigeria are expected to provide subsidised housing units in an effort to prevent the low-income groups from living in shacks. For instance, Ogun State government in Nigeria in the state housing policy stipulated the following objectives which are to: (i) enhance the evolution of appropriate institutional framework for public housing

delivery (ii) encourage home ownership with secured tenure among all socio-economic groups (iii) promote private sector participation in public housing (iv) provide self-sufficient public housing estates that meet the daily challenges of all residents and (v) provide all socio-economic groups access to adequate housing at affordable cost.

Ogun State government in Nigeria recently planned to provide about 12,230 housing units between 2003 and 2011. Though, the idea of providing subsidised housing scheme is good for the people, the economy and the quality of life of the poor but it does not end there. After the houses have been occupied for some time, projects need to be evaluated periodically to check whether these housing developments indeed meet the needs and expectations of the occupants based on the minimum acceptable standards.

Moreover, World Health Organisation [WHO] (1987) and Habitat (1996) are of the view that the quality and size of housing and the quality of the neighbourhood in which it is located is obviously important for privacy, security and an enjoyable domestic life. Its location is important in terms of the access it provides its residents to employment locations, required city services, and amenities that promote good health. From the foregoing, housing, no doubt, is very important in meeting human needs and expectations.

In addition, Performance evaluation of built facilities (housing inclusive) had often been based on how well the physical structure conformed to design specifications. Mohsini (1989) as well as Torbica and Stroh (1999) mentioned that this approach is meaningful though not without limitation, because the main concern of the occupants is how the constructed facilities meet their needs and expectations. The current and future prospects in the housing sector depend on the extent to which owners/occupiers are satisfied with the built facilities. This emphasis is based on the fact that many problems in the built

environment are the result of neglecting the Post Occupancy Evaluation (POE) from the occupiers' satisfaction approach.

In Federal Facility Council (2001), Preiser and Vischer (2005), Post-Occupancy Evaluation (POE) is viewed as a sub-process of Building Performance Evaluation, (BPE) and it is defined as the act of evaluating buildings in a systematic and rigorous manner after they have been built and occupied for some time, to determine the degree to which occupied building meets inhabitant's/ user`s needs. Watson (2003) slightly differs in its definition by adding that BPE is a systematic evaluation of opinions about buildings in use, from the perspective of the people who use them. It is an assessment of how well the building matches the user's needs, which in turn helps to identify ways to improve building design, performance and how it can fit the purpose for which it was built.

POE systematic analysis of a particular environment is to gain understanding of the impact it has on occupants of a building and its environment, hence how it facilitates or inhibits daily activities of the occupants (Watson, 2003). POE is conducted after the building has been occupied for some time so that occupants are accustomed to the new space and the experience of moving does not bias the result (Huzenga, Zagreus, Arens and Lehrer, 2003).

Building Performance Evaluation (BPE) is the process of systematically comparing the actual performance of buildings, places and systems to explicitly documented criteria for their expected performance. It is based on the Post Occupancy Evaluation (POE) process model developed by Preiser, Rabinowitz, and White (1988). Building Performance Evaluation (BPE) is an innovative approach to the planning, design, construction and occupancy of buildings. It is based on feedback and evaluation at every phase of building

delivery, ranging from strategic planning to occupancy, through the building's life cycle. It covers the useful life of a building from move-in to adaptive reuse or recycling (Preiser and Vischer, 2005). BPE is a way of systematically ensuring that feedback is applied throughout the process so that building quality is protected during planning and construction and, later, during occupation and operations.

Applying the BPE framework to large-scale residential construction would not only improve the cost and quality of such housing, but it would also ensure that the environments occupied by the users meet criteria of environmental quality, cost-effective construction practices, and other social needs (Preiser and Vischer, 2005).

When developers initiate new projects, information gained through Building Performance Evaluation will help them to avoid mistakes previously made, save developers money, ensure proper construction of houses, give a platform to dwellers to air their likes and dislikes regarding their houses and contribute to improving the quality of life and housing satisfaction levels of the poor (Darkwa, 2006). Therefore, the developers and designers need feedback from occupants of low-income housing to ensure that they deliver a product that is in demand, to avoid repeating mistakes and to improve on existing structures. This type of evaluation provides objective feedback from the occupants of the dwelling. Evaluation needs to incorporate research into housing designs and housing delivery up to a stage where research informs design. This will ensure a bigger focus on what the inhabitants need rather on delivery and numbers only (Brand and Orfield, 2004).

Government needs to recognise that the environment in which a house is situated is as important as the house itself to the occupants. This means that both houses and the environment should satisfy the housing needs and requirements of the occupants. By

creating housing that best suites the requirements and needs of the occupants, the National Housing Policy would have met its goal of providing subsidized housing that is both satisfactory and uplifts the occupants' quality of life.

It is based on this background that the study was carried out to evaluate the performance of the State public housing estates and determine whether or not the State subsidised housing estates fulfil the initial design concept and/ or the needs of the users, as regards the occupants` satisfaction.

1.2 Statement of the Research Problem

Leaman (2004) and Fatoye (2009) viewed buildings as systems that have many interacting systems and subsystems both as part of the physical infrastructure and show how human activities are organized within and related to them. They also have clear hierarchic properties in which constraints are handed down from one layer to the other. Different professions such as architecture, engineering, estate surveying valuation and town planning tend to operate at different levels in this hierarchy.

At the bottom of the hierarchy is the user, who lives with the consequences of all these decisions (Leaman, 2004). Architects, planners and consultants may come and go but users spend their lives in the creations of the designers. Barrett and Baldry (2003) observed that very few organizations ask users whether a building meets their requirements even-though the people that understand a building best are the people that use it every day. In most cases, the people concerned and affected by the design are never involved or considered in the design process. Design and decision-making is rather

concentrated, fragmented and involves only a small group of experts (Danny, 2003). This process sees many consultants working in isolation, resulting to inadequate briefs, with many variables that have considerable/significant effects on their designs.

It is generally known that organizations simply identify their need to build and go through the process of planning, briefing, design, construction and final occupancy. This process is linear and usually repeated for every new building project that the organization may undertake (Barrett and Baldry, 2003). Although this is the typical process, it is not necessarily the best. Absence of evaluation does not allow organizations to make use of their staff (users), which is a valuable resource at their disposal; this gap limits the opportunity to learn from the users how well the building is performing in terms of user needs. Data and information from evaluation can be used as a feed-back/feed-forward into designs for new buildings or improvement of existing ones (Preiser, 1995). This shows that there is a nexus between design brief, evaluation and feedback. Evaluation and feedback provide the necessary information for good brief, which in turn contribute to high building performance and overall organizational effectiveness. Unfortunately, Leaman (2004) and Mayaki (2005) observed that feedback is not better used because most designers and builders tend to be territorial in defending their perceived areas of expertise and often go on to the next job without learning from the one they have just done. Evaluation of buildings provides opportunity for organizations to see how well a particular building facility meets their requirements.

For long term strategic planning, evaluation of buildings provides information about what kinds of buildings will be needed in the future to accommodate the organisations' expected development (Barrett and Baldry, 2003). Information or knowledge of buildings

that are performing poorly and those that are performing well helps organizations in the consideration of long-term strategic plans. Besides, operational and maintenance decisions can benefit from building performance data.

Buys (2004) and Ha (2008) observed that the failure of many housing projects might be traceable to the lack of knowledge on the determinants of residential satisfaction. The studies stressed that the success of housing programmes does not only depend on mere provision of housing units, but also on other factors that affect the need of residents based on the housing quality. The achievement of quality, aside time and money in any housing project is a key factor that contributes to the ultimate success of that project. If the housing sector is to improve the quality of the residential buildings it produces in meeting the needs and expectations of consumers, it then must take a proactive approach to understanding consumers' views on the quality of the building being produced. This can be done effectively through the assessment of users' satisfaction on the quality performance of dwelling houses.

In developing countries like Nigeria, State Governments are expected to provide subsidised housing units in an effort to prevent the low-income groups from living in shacks. For instance, Ogun State government in Nigeria recently planned to provide about 12,230 housing units between 2003 and 2011 through its public housing programme which is adequately reflected in the objectives of the State`s Housing Policy. After the houses have been occupied for some time, projects need to be evaluated periodically to check whether these housing developments indeed meet the needs and expectations of the occupants.

It is equally important to find out whether 1) the quality of initial design meets the minimum international standards 2) quality of construction is line with minimum

standards 3) the conditions of the housing estates are satisfactory to the residents` of the estates after occupation.

Olatubara and Fatoye (2006) and Olatubara (2008) observed that unfortunately most of State governments in Nigeria provide housing estates and do not regard building evaluation of these housing estates as an area of legitimate interest. They do not lay much emphasis on the user-value of the buildings which are not adaptable, flexible and fit for the purpose that they were created. They have provided housing estates and there is no evidence to show that any study has been done to assess the resident's satisfaction of these housing schemes. Therefore, a research need arises to study residential satisfaction of the public low-income housing inhabitants whose economic ability for alternative housing is limited. Furthermore, continuous assessment of residential satisfaction of the low-income housing estates is essential in order to guide future public housing policies especially for low-income people in the country.

The study is therefore carried out to evaluate performance of State subsidized housing scheme in Ogun State to determine the occupiers' level of satisfaction with respect to performance under the elements of building performance, because the government needs feedback from the occupants of these housing estates they have provided. This would ensure that the government focus on what the inhabitants need rather than on just delivery of houses and the numbers of housing estates delivered only.

The satisfaction level of the occupants would be used to assess the quality of housing estates and the result would serve as a benchmark or yardstick to quality improvement in future housing production and delivery. It would also help government and housing developers build better residential estates for user occupiers and assist in providing

healthy, productive and comfortable in/outdoor environment and long-term benefits to them as well as maximize value for their money. To ascertain how well the building is serving the needs of the occupier or to identify any major deficiencies in its overall performance, therefore performance evaluation is very crucial.

This evaluation study attempted to find out the levels of residential satisfaction experienced by the occupants of government housing schemes, which is whether or not the occupants of the housing estates are satisfied with their houses. The pertinent questions are:

1. What is the initial intention of the State Government for establishing the housing estates?
2. What are the expectations of the occupants of the housing estates?
3. Are the occupants of the State Government Housing Estates satisfied with their houses?
4. Which factors affect the levels of satisfaction of the residents in the housing estates?
5. What are the present physical conditions of the housing units, the housing complex and the housing estates?

The study provided answers to these questions.

1.3 Aim and Objectives of the Study

The aim of this study is to evaluate the performance of State Subsidized Housing scheme, using Ogun State Public Housing Projects as a case study.

In order to achieve the aim of the study, the objectives are to:

1. examine the institutional framework of Ogun State Property and Investment Corporation (OPIC) in relation to housing delivery process.
2. evaluate the physical characteristics and conditions of the housing units at post occupation .
3. examine the socio-economic characteristics of the residents in the selected public housing estates.
4. ascertain factors which influence levels of residents' expectations and satisfaction with the housing estates.
5. compare the occupants` expectations of the housing units with their housing experience in the estate.

To further help in the evaluation of the performance of the State housing estates some hypotheses were proposed. The hypotheses were tested based on the proposition that residential satisfaction in public housing is determined by the respondents' perceived levels of satisfaction with objective characteristics like dwelling unit features, dwelling unit support services, public facilities, social environment, and neighbourhood facilities.

Null hypothesis 1

There is no significant relationship between socio-economic characteristics of the residents of public housing and their residential satisfaction levels.

Null hypothesis 2

There is no significant relationship between the length of residency in the housing estate and the levels of satisfaction of the residents of the state public housing estates.

Null hypothesis 3

There is no significant relationship between the physical conditions of the housing estates and the levels of satisfaction of the residents of the estate.

1.4 Significance of the Study

Research on housing has gone beyond the study of the physical, structural and functional features of one's territorial core called 'house' (Hayward, 1977 and Lawrence, 1987). Also, UN-Habbitat, 2006 and Opara, 2003 stated that most urban residents in developing countries live in housing conditions that constitute an affront to human dignity and which comes with appalling social, economic, spatial and health implications. Therefore, measuring the housing quality through regular tenant satisfaction surveys has become an important tool and local governments in both UK and USA. This ensures that households are satisfied with the provided housing and its services (Varady and Carrozza, 2000).

Although, interest in Building Performance Evaluations has increased significantly in recent years, anecdotal evidence suggests that it is a more mainstream activity in the United States of America, Australia and some European countries than it is in Africa including Nigeria (Preiser, 1996; Barrett and Baldry, 2003). The fact that a lot of money goes into the procurement of buildings shows that an evaluation process is needed to ensure that it works as intended because buildings are designed and built to meet specific or group of needs already determined to a large extent before implementation (Okoli and Shakantu, 2009). The ability of the building to successfully accomplish the purpose for which it is designed measures its success (Mayaki, 2005).

It is in this light that the study was carried out to address the increasing recognition of the complexity and significance of the inter-relationships between people, the physical

environment and the public housing estates provided by State Government. To assume that a State Government estate is as much a resource as its human and financial assets and the activities of the housing estates of the State Government is not an exception. Ogun State residential estates involve substantial portions of public funds; therefore the proactive management of the built estates can contribute significantly to the achievement of goals of the government of providing safe and healthy housing estates.

The study highlighted the importance of occupants' satisfaction by assessing the housing estates to know whether the buildings provided 'work' to the satisfaction of the occupants. Consequently, it would help the housing providers and State Government in providing better new buildings, improve design for future buildings, develop new facilities and manage the buildings more efficiently and more cost effectively. Applying the BPE framework to large-scale residential construction would not only improve the cost and quality of such housing, but it would also ensure that the environments occupied by the users meet criteria of environmental quality, cost-effective construction practices, and other social needs.

Measuring residential satisfaction is therefore important because it would broaden one`s understanding of how and why occupants respond to certain factors in the environment in which they live as well as to certain housing types and living conditions. The study provided information that can be used to improve residential living conditions of the people whose preferences and requirements are not known through the normal housing channels and markets.

The research identified methods and ways to increase access to resources in order to maximize residential satisfaction. Moreover, in the light of rapidly changing societal

values, aspirations and preferences, this study is particularly important to professionals in public housing provision; as it attempts to provide empirical data that can form vital input for the design and planning of user responsive housing units and residential environment in future public housing schemes.

Finally, it would assist Ogun State Government and other stakeholders in construction industry to produce cost effective buildings, with healthy, productive and comfortable indoor environments. This would be of long-term benefits to the residents of the housing estates thereby addressing the housing needs of the citizens.

1.5 Scope and Limitations of the Study

Several housing projects have been executed by Ogun State Government since the creation of Ogun State in 1976. Successive governments have provided different categories of housing estates for low- income, medium -income and high- income earners in Abeokuta, the State capital -Ibara Housing Estate, Oke-Ata Housing Estate, Kenta Asero, Laderin, and Ewang Housing Estates. Aside from these estates in Abeokuta, there are other Government estates in Ikangba, Ijebu Ode, Ota, Sagamu, Ayetoro, Ilaro including Mowe and Ikenne .

The scope of the study is therefore limited to low- income housing schemes initiated by Ogun State government between 2000 and 2010. Ten public housing estates were covered by the study. These are Asero, Ajebo, Laderin, Ijebu Ode, Agbara, Sagamu. Ota, Mowe/ Ibafo, Ikenne and Ilaro. The sample size of the population consisted of those low-income housing units that have been occupied for at least one year.

There are several agencies involved in the provision of providing housing estates in Ogun State namely Ministry of Housing; Ministry of Special Duties; Bureau of Lands and Survey; Bureau of Urban and Physical Planning; Ogun State Urban and Regional Planning Board and Ogun State Property and Investment Corporation. Others are the Ogun State Housing Corporation; Gateway City Development Company; Housing Project and Gateway Savings and Loans Limited. However, data was collected from Ogun State Property and Investment Corporation (OPIC) as they relate to public housing delivery with much emphasis on residential housing schemes.

The study evaluated specific aspects of planning and detailed design as well as matched performance of the buildings against expectations of the occupants of the estates. The design expectations were evaluated in terms of function, accessibility, purpose, aesthetics, experience and environmental quality. These variables were regarded as quality performance objectives and were evaluated against institutional standards, user requirements and best practices. Accordingly, the study did not evaluate the engineering performance of buildings which includes structural stability and the integration and robustness of systems. It only evaluated performance of physical characteristics of the estates from the point of view of the occupants with regard to their levels of satisfaction with the housing units, neighbourhood and social facilities.

1.6 Definition of Terms

In order to facilitate clearer understanding of the terms used within the body of the study, it is necessary to offer a number of operational definitions, particularly for the common words/terms.

1.6.1 Building Performance Evaluation (BPE)

Building Performance Evaluation, (BPE) is defined as the act of evaluating buildings in a systematic and rigorous manner after they have been built and occupied for some time, to determine the degree to which occupied building meet inhabitant's user's needs. It is based on the Post Occupancy Evaluation (POE).

1.6.2 Community

This refers to a territorial organised population mutually dependent on each other, supporting some basic social institutions and having some measure of political autonomy in relation to other communities.

1.6.3 Household

Household is defined as a group of individuals living together under the same roof or in the same housing unit, who participate in and benefit from the collective survival strategy and experience of the residential unit, that is, who share the same source of sustenance and think of themselves as a unit.

1.6.4 Housing

The word `house` is both a noun and a verb. The term housing therefore refers to the physical structure as well as to what it does, namely to provide security and access to social and economic amenities. As a noun housing refers to a product. Therefore as verb, "house" is viewed as a process.

Housing is defined as the process of providing functional shelter in a proper setting in a neighbourhood supported by sustainable maintenance of the built environment for the day-to-day living and activities of individuals and families within the community.

1.6.5 Public Housing

Public housing is assumed to mean government subsidized housing projects..

1.6.6 Social Housing

Social housing is regarded as a form of housing provision, which emphasises the role of the State (government and its agencies) in helping to provide housing, particularly for the poor, lower-income and more vulnerable groups in the society.

1.6.7 Social Policy

Social policy refers to those areas of consumption in which the state plays a central role, either by regulating the provisions of services underwriting the cost of their provision, or providing goods and services in kind.

1.6.8 Residential Satisfaction

Residential satisfaction is defined as the feeling of contentment which one has or achieves when one's needs or desires in a house have been met.

CHAPTER TWO

THE CONTEXTUAL BACKGROUND OF THE STUDY

2.1 Introduction

This Chapter provides contextual background information on the study and study area. First, it gives full description of Ogun State, the study area. Second, the trend of public housing provision in Ogun State by the selected public housing agencies responsible for provision housing in Ogun State. The information in this Chapter was obtained as secondary data from relevant publications by the public housing providers.

2.2 Study Area

Ogun State was carved out of the old Western State by the military administration of General Murtala Muhammed and General Olusegun Obasanjo in February 1976. The new State was made up of the former Abeokuta and Ijebu provinces of the former Western State, which came into being when it was carved out of former Western Region in 1967. The capital of Ogun State is Abeokuta and the major towns are Abeokuta, Ijebu-Ode, Sagamu, ikenne, Ilaro, Ijebu-Igbo, Ota and Aiyetoro. It is easily accessible to other States in Nigeria and can be linked to the outside world through the International Airport and Sea ports in Lagos State. It also has international network of roads that links it with other West African sub-regions. The State is divided into three regions namely, Yewa to the west, the Egba and Remo in the central core, and the Ijebu to the east.

Ogun State has a total of twenty (20) local government areas (Table 2.1). These are: Abeokuta North, Abeokuta South, Ogun Water-Side, Ijebu- Ode, Ijebu North, Ijebu East,

Odogbolu, Ikenne, Sagamu, Obafemi Owode, Odeda, Iffo, Ado-Odo/Ota, Egbado North, Egbado South, Ilugun Alaro, Imeko-Afon, Idarapo, Ipokia and Ewekoro.

The 20 Local Government Areas (LGAs) each is headed by a Chairman, as enshrined in the Constitution. It is divided into four Geo-political Zones, three Senatorial Districts, nine Federal and 26 State Constituencies. The state is administered by the Governor who works with a cabinet of Civil Servants, Commissioners, Special Advisers and Consultants in the daily running of the Ministries, Departments and Agencies (MDAs). They work in collaboration with the Secretary to the State Government to supervise and co-ordinate the implementation of Government policies and programmes through various Ministries, Bureaux, and Commissions. Boards, Parastatals agencies.

2.2.1 Location and Size

Ogun State is located in the Southwest Zone of Nigeria with a total land area of 16,409.26 square kilometres. It is bounded on the West by the Benin Republic, on the South by Lagos State and the Atlantic Ocean, on the East by Ondo State, and on the North by Oyo and Osun States as shown in Figure2.1. It is situated between Latitude 6.2°N and 7.8°N and Longitude 3.0 o E and 5.0°E. The land area of about 16,762 square kilometres of Ogun State, represents about 1.8 percent of Nigeria‟ s total land mass of 924,000 square kilometres. It is ranked 24th largest land mass out of the 36 States in Nigeria

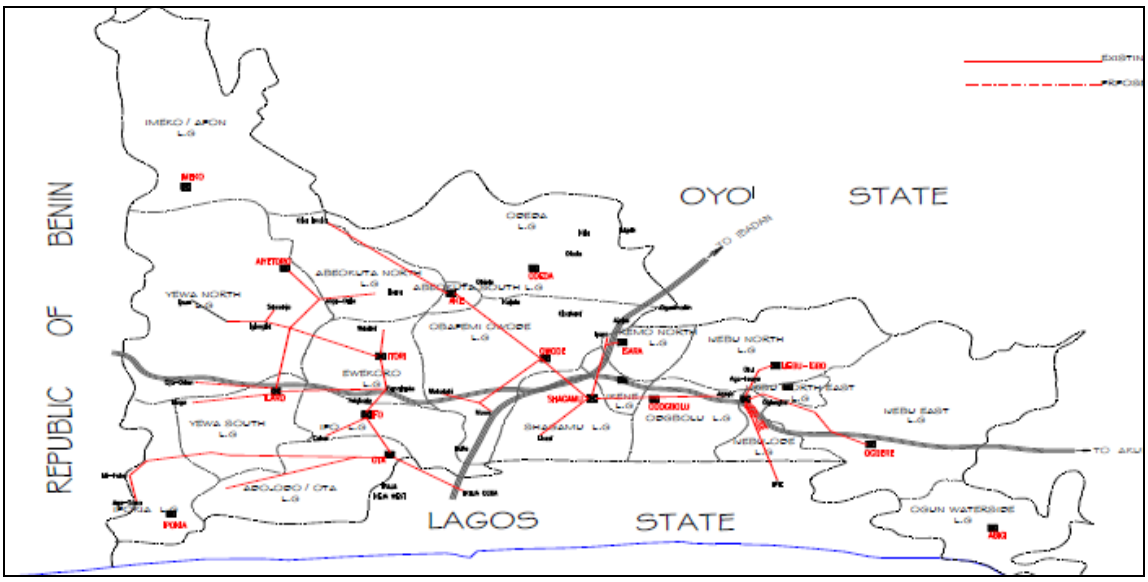

Figure 2.1: Map of Ogun State showing 20 Local Government Areas.

Source: Ogun State Regional Plan (2003)

2.2.2 Climate

The climate of Ogun State follows a tropical pattern. The raining season starts about March and ends in November, followed by dry season. The mean annual rainfall varies from 128cm in the southern parts of the State to 105cm in the northern areas. The average monthly temperature ranges from 23°C in July to 32°C in February. The northern part of the State is mainly of derived Savannah vegetation, while the Central part falls in the rain forest belt. The southern part of the State has mangrove swamp (Ogun State Regional Plan 2003). The geographical landscape of the State comprises extensive fertile soil suitable for agriculture, and Savannah land in the north western part of the State, suitable for cattle rearing. There are also vast forest reserves, rivers, lagoons, rocks, mineral deposits and an oceanfront. Ogun State is characterised by high lands to the north which

slopes downwards to the south. The highest region is in the north-west which rises over 300 metres above sea level while the lowest level is the southern part which terminates in a long chain of lagoons (Ogun State Regional Plan (OSRP), 2003).

2.2.3 Demographics

The population of Ogun State during the 1991 Census was 2,333,726. In 1991, Ogun State had a total of 578,835 households distributed unevenly across the LGAs in the State. With its growth rate of 2.83 per cent per annum, the population estimate for 2003 was projected at 3,297,408 and 3,486,683 for 2005. The projections indicated that in 2003, about 1,483,834 of the population (45 per cent) would live in urban areas 1,813,574 (55 per cent) in rural. The male population was estimated at 1,615,730 (49per cent), and female 1,681,678 (51 per cent). Children under one year old numbered about 5.40 per cent and those under five years accounted for 19.10 per cent. Women of childbearing age (15-49 years) made up 25.0 per cent of the population and about 49 per cent of the total female population. Children under age five accounted for 629,805 (19.1 per cent) of the total population. (Ogun State Regional Plan 2003)

The population of Ogun State as at 2003 is estimated to be 3.246 million. This population comprises of 1.591 million males (49%) and 1.655 million females (51%). At 3.25 million, the state population is about 2.5% of the projected 2003 national population of 133 million. The State land area is 16,762km2, representing 1.8% of the nation's total land mass. Thus the population density of the state stands at 194 persons per square kilometer as shown in Table2.1. (Ogun State Regional Plan, 2003).

On the basis of population density, the population of the State varies from one LGA to the other according to the NPC census figures. Abeokuta is readily the densest settlement with 7476 persons per square kilometre. The other fairly dense local governments are Ota, Ifo, Ijebu-Ode, Ikenne and Sagamu with population densities in the range of 300 – 900 persons / km2. All other settlements have densities of less than 300 persons per square kilometer National Population Commission (1998). The projected population figure of Ogun State in 2003 is derived from two main components: the State base population of 2.334 in 1991 (NPC) and an annual growth rate premised on different fertility decline scenarios at the national level.

Table 2.1: Population of Local Government Areas in Ogun State

S/N	Local Govt Areas	Land Area (Ha) Km^2	Male	Female	Total
1	Abeokuta North	723.80	96,872	104,457	201,329
2	Abeokuta South	57.36	118,346	131,932	250,278
3	Imeko /Afon	1,711.43	40,681	41,536	82,217
4	Egbado/Yewa North	2,043.60	87,523	94,3035	181,826
5	Egbado/Yewa South	585.00	82,001	82,849	168,850
6	Obafemi-Owode	1,430.58	115,369	113,482	228,851
7	Ewekoro	631.50	28,154	27002	55,156
8	Odeda	1,547.29	54,263	55,186	109,449
9	Ipokia	576.57	71,917	78,509	150,426
10	Ado-Odo/Ota	885.08	260,021	266,544	526,565
11	Ifo	487.17	267,587	257,250	524,837
12	Sagamu	640.04	123,801	129,611	253,412
13	Remo North	195.81	29,100	30,811	59,911
14	Ijebu North	969.02	138,419	145,917	284,336
15	Ijebu North-East	124.45	33,908	33,726	67,634
16	Ijebu East	1,985.25	57,233	52,873	110,196
17	Odogbolu	568.80	62,247	64,876	127,123
18	Ijebu Ode	209.2	74,754	79,278	154,032
19	Ikenne	137.13	68,729	50,006	118,735
20	Ogun Waterside	860.32	36,228	36,707	172,935
	Total	192,628.50	1,847,243	1,847,243	3,728,098

Source: Federal Republic of Nigeria (2007) and Ogun State Regional Plan (2003)

2.2.4 lnfrastructure and Economic Activities

The State has two major expressways which pass from Lagos to the Northern and Eastern parts of the Country, namely, the Lagos-Ibadan, Sagamu-Benin Expressways, and Sango-Ota to Abeokuta. Another Trunk "A" road links Abeokuta to Ibadan. There is also the Ota-ldi-Iroko Road and the Sagamu Interchange, Ilaro-Ohunbe Road which leads to the rest of West African countries. Agriculture is the main occupation of the people, providing income and employment for a large percentage of the population. The main

cash crops produced in the State are cocoa, cashew, kola nut, oil palm and palm kernels, rubber and coffee. The State is a major producer of kolanut in the country.

The State also produces rubber on a large scale, as well as timber of various species. Out of the total land area of approximately 16,409 square kilometres, about 20 per cent is preserved as forest reserves. The Forest Reserves have over 26,352ha of gmelina, teak and pine. All these species are available as raw material for pulp and other wood based industries. Because of their abundant natural resources, ample level of infrastructure and availability of recreational facilities, these forest reserves have become a viable Tourist Centre.

2.3 Evolution of Government Provision of Housing in Nigeria

The progress in the evolution of housing provision by government in Nigeria may be captured in the provisions in the National Development Plans since independence. In the first National development Plan of 1962 to 1968, there was no clear-cut policy on housing, save provision for government workers in the major urban centres of Lagos, Enugu and Ibadan. This situation was slightly improved in the second National Development Plan for 1970 to 1974 period which saw the setting up of a National Council on Housing. The policy outcome of this period tended towards the direct construction of houses by the government. Housing finance also benefited in this period, as the Nigerian Building Society (which was to later become the Federal Mortgage Bank of Nigeria) was strengthened to enable federal public servants obtain loans to extend or build houses or purchase lands to build. The most remarkable outcome for housing during the third National Development Plan (1975-1980) period is the formal adoption of mass-

housing as a national housing policy. Mass Housing was defined as accommodation for low-middle to low-income groups in 1-3 bedrooms; and meant mainly for government officials and some units for letting at subsidised rates. An affordability rate of 20% of earning for low income groups - defined as people earning less than =N=3,000 per annum was adopted. Thus direct intervention continued, although with limited success. The Federal Housing Authority for instance achieved only 19% of its targets for the Lagos Metropolitan Areas, and 13% for the rest of the country. This period also saw formal assistance to indigenous contractors, the promotion of local building materials such as burnt bricks for construction, the development of utilities and community development services and the encouragement of the use of foreign contractors. (This was allegedly abused as there was then a large influx of inexperienced contractors into the country).

In the 4th National Development Plan (1981-1985), direct construction also continued, on the basis that the private sector alone cannot cope with the over three million housing units' shortfall required over a 10 year period. This also met with limited success due mainly to poor location, lack of infrastructure and relatively high costs.

The overall achievement was about 20%. In this period, low-income was expanded to cover all wage earners and self-employed people, whose annual income was below =N=3,000 and this comprised about 70% of Nigerians at the time.

Although the fifth National Development Plans (1986-1990) was not formally published, some developments are worthy of note:

- The encouragement of employer housing schemes.
- The release of serviced plots to individuals and organisations by the FHA which had become a limited liability company at this time.

The Federal Mortgage Bank of Nigeria (FMBN) became a stronger institution with its designation as the national apex mortgage bank. It could tap from any unused part of the mandatory 10% set aside loan-able funds for the housing sector drawn from commercial banks. The various State governments embarked on schemes of their own largely based on site and services schemes but also directed towards low-income housing construction programmes.

The 'new' National Housing policy from 1991-2000 had as its main goal of ensuring that all Nigerians has access to decent dwelling accommodations at affordable cost by the year 2000'. This of course was not achieved. However, the policy attempted to allocate roles for the three tiers of government to actualise its goals. It also set out to:

1) Locate housing in the same ministry as other urban and regional planning functions
2) Ensure Local Government participation especially in the determination of rural housing needs.
3) Facilitate housing finance by the initiation of voluntary and mandatory NHF schemes for all Nigerians.
4) Improve research and development by the setting up of the Nigerian Building research Institute from the Nigerian Building and Road Research Institute NBBRI.

By 2005, a new policy on housing emerged. It was acknowledged that although the government had the responsibility to house its citizens, it would step back from direct construction; while laying emphasis on private sector partnership in realising its goals of "ensuring that all Nigerians own or have access to decent, safe and sanitary housing

accommodation at affordable cost with secure tenure''(Ministry of Housing 2005). It was also acknowledged that a holistic approach had to be the basis of the housing strategy and hence the co-location of housing and urban development.

Although the policy had just taken off, it has set for itself the target of 40,000 housing units across the country with 1000 in each State and 2000 in Lagos and Abuja. The FHA had undergoing restructuring: As at March 2007, a new focus has been defined for the organisation: the construction of social housing, provision of site and services schemes, construction of commercial buildings, the proceeds of which would be used to subsidise social housing. Partnership with stakeholders and end-user groups is also a part of this policy.

Several issues can be raised from the various National Housing experiments: The first is that even though government had embarked on the direct construction of housing for low income groups, it had never met its targets, calling to question, the efficiency and effectiveness of these policies. The provision of housing has almost always been directed at public servants with regular, though low incomes. It was only during the 1881-1985 period that attention was paid to self-employed people. It does not appear that this attention was sustained in subsequent periods. Until recently, private sector participation has not been vigorously pursued within the policy framework. The tendency has been to allow private housing provision to follow market forces.

As succinctly put, 'the bulk of policies on housing have revolved primarily 'around programmatic alternatives, and it is often through decisions concerning these alternatives, rather than through explorations of basic issues that these policies have revolved'. (Agbola, 2005).

2.4 Brief History of Housing in Ogun State

Ogun State inherited the Western Region policy of encouraging house ownership by its workforce rather than depending on the provision of houses by government. As at 1976, therefore, there were only two estates in the State, one in Abeokuta and one in Ijebu-Ode. As there was no regional capital in the State, there were very few government buildings in the new State capital. Other urban centres had even fewer government owned houses, and they were virtually absent in the rural areas. Most houses in the State were thus either family compounds or privately built houses. For most of the settlements, the population was diminishing due to migration and the demand for let-able houses was low. The privately built houses were thus rather for status rather than commercial investments. With the creation of the State, and the movement of the first State Government to Abeokuta, housing shortage was the first challenge, both in quality and quantity. This was the start of government involvement in housing production in the State.

2.4.1Housing Provision by Government in Ogun State

The provision of housing in Ogun State by government may be categorised into two. The first is the provision of houses by the Federal Government as detailed above, and from which the State benefited. Specifically, this category includes the following housing developments:

During the 1975-1980 development plan period, the Federal Housing Authority (FHA) had allocated 893 plots, completed 512 housing out of the 8000 housing plus land projected for the state, but this was only a 17.6% achievement. Second, the vehicle for the production of houses in the State was the State Housing Corporation. Created in 1997 as an offshoot of the Western Nigeria Housing Corporation established in 1956, its

primary objective was to increase the availability of dwelling houses, commercial and industrial buildings in the State for acquisition by members of the public. Within the first year of its creation, 200 housing units were built at Oke Ata in Abeokuta and another 350 units in Ijebu Ode (Omole, 2001). The State also participated in the Federal Government of Nigeria's Housing Programme (1976-1980), where all the twenty States of the federation including Ogun State were mandated to build 4,000 housing units each (Nwaka, 2005). State also participated in the implementation of the National Low-Cost Housing Scheme of the Fourth National Development Plan (1980-85). Onibokun, 1985 and Awotona, 1990 stated that scheme was not successful in all the states including Ogun State (Mustapha, 2002; Bello and Bello, 2006).

According to Adedipe and Lasisi (2006), the housing challenges in Ogun State are both in quantity and quality, and are more critical among low-income households in the urban centres. The quality of housing and environment in the State is a reflection of a state of under-development of the housing sector.(Ogun State Regional Plan, 2003)

In September 1984, Ogun State Property and Investment Corporation (OPIC) was formed. The charge to OPIC was to open up prime areas of the State and to carry on the business of property development. 20,000 hectares of land along the Lagos- Sagamu expressway, 8,000 hectares at Agbara/Igbesa, 1,000 hectares along Badagry – Sokoto road were acquired by Government and given to OPIC to manage.

Currently, Ogun State government has paid a renewed focus on the production of worker's villages. It has also promised to 'provide and expand different housing schemes for different categories of people: low-income; public servants; middle and high class in all districts of the State Ogun State Government (2007). The State's public sector

providers are also currently liaising with private sector partners for housing provision in the development of estates.

2.4.2 Ogun State Government Housing Agencies

Ogun State Government established a number of organisations to execute its housing programmes. In 2003, The Ministry of Housing was carved out of the old Ministry of Works and Housing, and a year later the Gateway City Development Company Limited (GCDCL) and Gateway Savings and Loans were established. The other agencies involved in the production of public housing during Otunba Gbenga Daniel`s administration in Ogun state include: Ministry of Housing; Ministry of Special Duties; Bureau of Lands and Survey; Bureau of Urban and Physical Planning; Ogun State Urban and Regional Planning Board and Ogun State Property and Investment Corporation. Others are the Ogun State Housing Corporation; Gateway City Development Company; Housing Project and Gateway Savings and Loans Limited. Some of these agencies are involved in actual production while others are only to facilitate the process of production. The study showed the breakdown of low- income, medium-income and high-income housing estates built the agencies involved with the actual production which include Ogun State Ministry of Housing (MOH), Ogun State Housing Corporation (OSHC), Ogun State Property and Investment Corporation (OPIC) and Gateway City Development Company Limited (GCDCL).

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2.4.3 Ogun State Housing Corporation

Ogun State Housing Corporation (OSHC) is the oldest State Government owned public

housing agency. The OSHC came into existence through the enactment of Ogun State Edict No. 11 published in Ogun State of Nigeria Gazette No. 12 Vol.2 of 16th June 1977. This agency took over the task of public housing provision in Ogun State from the Western Nigerian Housing Corporation at the creation of Ogun State in 1976.

The mission of the organization stemmed from the need to increase the availability of dwelling houses as well as provide commercial and industrial buildings in a decent, safe and neat environment at affordable cost to members of the public in the State as stated in OGSHC, (2008). The major activities of the organization include the following:

(i) Security of land tenure for residential, commercial and industrial purposes

(ii) Utilization of local building materials to conserve foreign exchange

(iii) Cost- effective use of conventional building materials

(iv) Consultancy/Professional services from project planning to turnkey completion

(v) Earth-moving equipment and plant hire, and

(vi) Mortgaged facilitation (OGSHC, 2008)

The Corporation was originally charged with the responsibilities of managing and maintaining residential, industrial and commercial estates in all the geo-political zones in the State. Although the first major assignment of OSHC was the implementation of the National Low-Cost Housing Scheme of the Fourth National Development Plan (1980-85), so far the operations of the Corporation had centred on five basic activities of property development, site-and services, consultancy services, equipment hiring, and estate management. In carrying out the above activities, OSHC has operational units/departments such as administration, works, estate and finance. Each of these units is headed by a Director who is responsible to the General

Manager. (OSHC, 2008) The contributions of OSHC in the real estate sub-sector is evident in a number of residential, commercial and industrial estates it maintains across the State. These include Twelve (12) in Abeokuta area, Seven (7) in Ota area, Eight (8) in Ijebu area and One (1) in Ifo (OSHC, 2008b). Table 2.2 shows the locations and sizes of projected and completed housing units by OSHC between 2000 and 2010.

Table 2.2 Housing Estates by the OSHC

	Name of Estate	No of Units	Method of Delivery	Category of Housing unit
1	OSHC Estate, Ota*	60	Shell Housing	Low, Medium
2	Ajebo Road Estate, Abeokuta*	100	Shell Housing	Low, Medium
3	Kemta Housing Extension, Olokota- Abeokuta*	88	Turnkey	Medium, High
4	Housing Estate, Ayetoro	100	Turnkey	Low, Medium
5	OGD Housing Estate, Ago-Iwoye	100	Core Housing	Low, Medium
6	Ibara Renewal Scheme Estate, Abeokuta	300	PPP	High
	Total	748		

Source: Ogun State Housing Corporation (2008); Ministry of Housing (2008)
*Completed at the time of survey

2.4.4 Ogun State Property and Investment Corporation (OPIC)

Ogun State Property and Investment Corporation (OPIC) was established by Edict No.10 of 1985 which took effect from September 1st 1984. OPIC was established basically to open up landed properties of the State and carry out the business of property development in any part of Nigeria. OPIC is next to OSHC in age. It is the third public housing agency established after the Ministry of Works and Housing and

Ogun State Housing Corporation. OPIC`s mandate is to fully explore the potentials and opportunities in landed properties in Ogun State in particular and in all parts of Nigeria through the establishment of residential and industrial estates that offer affordable accommodation and infrastructure to prospective clients in all its estates. The mission of the organization is to provide for their clients, at all times, affordable accommodation in a world class secured, peaceful and serene environment, with a conscious and determined effort to make the estates absolutely self-sufficient in meeting the daily challenges of all residents.(OPIC, 2008), OPIC has been involved in executing these objectives:

(i) Generating employment for skilled and unskilled labour and for professionals in the property industry

(ii) Participating in global effort to minimize environmental degradation

(iii) Maintaining the status of a revenue-generating and self-sustaining government agency

(iv) Maintaining and promoting a culture of transparency, openness, accountability, integrity and excellent service delivery in its operations. (OPIC, 2008).

However, the core activities of this organization revolve around the following areas:-

(i) The establishment of industrial and residential estates.

(ii) Performance of the duty of planning authority within the confinement of the organization`s estates.

(iii) Preparation of layouts of its landed properties into industrial and residential estates for allocation to members of the public and organizations.

(iv) Development of parts of its landed properties and letting them out on commercial

basis.

(v) Development, construction and management of housing and industrial estates vested in it within and outside Ogun State. (See Table 2.3)

(vi) Undertaking the business of builders, architects, consultants, surveyors, bricks, blocks and tile makers as well as house and estate agents.

(vii) Selling, leasing, letting, mortgaging and disposing off landed property, land, house or building on its estate (OPIC,2009).

In pursuant of the above listed objectives, OPIC has established two subsidiaries, namely, OPIC Company Limited and OPIC Consult. The former is a commercial outfit that deals with bulk buying of construction materials for OPIC`s construction works, and its clients. It also engages in the production of concrete blocks and survey beacons for use in the Corporations estates. The latter offers consultancy services in the areas of Architecture, quantity surveying, Civil, Structural and Electrical engineering to the public. It is also involved in turnkey construction projects

OPIC`s involvement in real estate development since its inception can be seen in the number of residential and industrial estates developed and managed by it in Agbara, Abeokuta and Mowe. It also has landed properties in Agbara and Abeokuta as well as OPIC Teak Plantation at the outskirt of Abeokuta (OPIC, 2008).

Presently, the management structure of the OPIC, at least by nomenclature, follows an approach that is more private-corporate than public service oriented, notwithstanding the fact that it was originally established first and foremost as a public corporation, intended to deliver public goods and services. This situation tends to align with the overall national

trend towards privatization and commercialisation, which seems to be the ideological inclination of the state government as well.

The Corporation`s management structure is headed by the Managing Director and flanged by Directors in Estate &Survey; Director Lands-Abeokuta; Director of Works and Services; Director of Administration; Director of Personal Management; Director of Research and Planning; Director of Legal Services; Head, OPIC Estate Agbara; Director of Marketing; Director of Accounts; Head, Internal Revenue; Head, Computer Section; Head, Internal Audit. The structure of the corporation is a top-down hierachial format, starting from the Managing Director, through Directors, the General Managers, the Assistant General Managers, Head of departments, the middle level officers and finally, the lower-level operators. In spite of the efforts at portraying a corporate image, the structure of the OPIC still follows the stereo-typed bureaucratic administrative form, the vertical hierachial pattern, similar to the practice in the traditional government establishments. Table 2.3 shows the number of projected and completed housing units by OPIC in Abeokuta and Agbara between 2000 and 2010.

Table 2.3: Housing Units by OPIC

S/N	Name of Estate	No of Units	Method of Delivery	Category of Housing unit
1	OPIC Housing Estate , Agbara*	60	Turnkey	Low , Medium
2	Obasanjo Hilltop (GRA) Estate, Abeokuta*	32	Turnkey	High
3	Luxury Scheme, Abeokuta	200	Turnkey	High
4	Medium Housing Scheme , Abeokuta	500	Turnkey	Medium
	Total	792		

Source: OPIC Publications (2009) and Ministry of Housing (2008)

* Completed at the time of survey

2.4.5 Gateway City Development Company Limited (GCDCL)

The Gateway City Development Company Limited, established in 2004 by the Executive Governor of Ogun State, Otunba Gbenga Daniel, is one of the youngest public housing agencies in Ogun State. Being a commercial real estate organization arm of Ogun State Government in the Lagos Mega City Area, GCDCL is charged with the responsibility of overseeing the development of the Gateway City Estates and other developments along Isheri-Sagamu axis of the State. The goal of this organisation is therefore to concentrate on the development of the Gateway City by ensuring orderly and robust development of this part of the State. For this reason, GCDCL is vested with the authority of scrutinising all physical developments along the Lagos-Sagamu expressway axis inter-phase between Lagos and Ogun States. This Company

also ensures strict compliance with urban and physical development legislations in the area under its jurisdiction. Generally, the objectives of this organization are to:

(i) engage in the business of real estate development;

ii) build, create and ensure well-planned and orderly developments within the Gateway City;

(iii) be an active player and facilitator in the proposed Lagos Mega City Project;

(iv) provide business and friendly environment for local and foreign investors and

(v) become a prime developer, lender and owner-operator of commercial, residential and recreational property.

However, its core business areas are:

(i) management of real estate portfolio,

(ii) rendering assistance to clients in selling and lease backing property on long –term basis,

(iii) joint venture project (Public-Private Partnership) in the development of housing schemes for the low, middle and high income earners,

(iv) the provision of site–and services scheme for residential, commercial and industrial purposes. The list of planned and executed housing schemes by the GCDCL in partnerships with some private sector organizations between 2000 and 2010 is displayed in Table 2.4

Table 2.4: Housing Units by the GCDCL

S/N	Name of Estate	No of Units	Method of Delivery	Category of Housing unit
1	OGD-Sparklight Housing Estate, Ibafo*	340	PPP	Low, Medium, High
2	Havilah Villas, Isheri*	160	PPP	Medium, High
3	Paradise City, Magboro	300	PPP	Low, Medium, High
	Total	800		

Source: Gateway City Development Company Limited (2008) and Ministry of Housing (2008)

* Completed at the time of survey

2.4.6 The Ogun State Ministry of Housing (MOH)

The last of the public housing agencies investigated is the Ogun Sate Ministry of Housing which was carved out of the old Ministry of Works and Housing in 2003. It is the supervising Ministry responsible for co-ordinating the activities of all the parasatals involved in public housing provision in the State. This Ministry is charged with the responsibility of initiating and coordinating public policies in housing,

Table 2.5: Housing Units by the MOH

S/N	Name of Estate	No of Unit	Method of Delivery	Category of Housing Unit
1	Workers Estate, Abeokuta*	270	Core Housing	Low, Medium
2	Media Village Abeokuta*	104	Turnkey	Low, Medium
3	OGD Housing Estate, Asero – Abeokuta*	212	Turnkey	Low, Medium, High
4	OGD Housing Estate, Itanrin, Ijebu-Ode*	30	Turnkey	Medium, High
5	OGD H. Estate Iperu	250	PPP	Medium, High
6	OGD H. Estate, Igbesa	350	PPP	Medium , High
7	OGD H.Estate. Ifo	350	PPP	Medium, High
8	OGD H Estate, Sagamu	50	Core Housing	Low, Medium
9	OGD, H. Estate, Ikenne Town	100	Core Housing	Low. Medium
10	OGD H.Estate, Oru, Ijebu	100	Turnkey	Low, Medium
11	OGD H. Estate, Ijebu-Igbo	100	Turnkey	Low, Medium
12	OGD H. Estate	100	Turnkey	Low, Medium
13	Abosimi H. Estate	100	Turnkey	Low, Medium
14	OGD Vertical Estate	50	PPP	Medium
15	Housing Estate, Olokonla	3000	PPP	Low, Medium, High
16	Abosimi Estate, Ogbere East	100	Turnkey	Low, Medium
17	H. Estate, Erunwun Isonyin (NE)	100	Turnkey	Low, Medium
18	High Rise Apartment, Laderin	30	Turnkey	Low, Medium
19	OGD Abosimi Estate., Omu-Ijebu	50	Core Housing	Low, Medium
20	OGD Estate, Oguo	300	PPP	Low, Medium
21	OGD Estate, Itele-Ota	300	PPP	Low, Medium
22	OGD Abosimi Estate, Kobape	500	PPP	Medium , High
23	Abosimi Housing Estate, Imeko	50	Turnkey	Low, Medium
24	Abosimi Housing Estate, Isara,	50	Turnkey	Low, Medium
25	Housing Estate, Odeda	100	Turnkey	Low, Medium
26	Housing Estate, Ota	300	Turnkey	Medium , High
27	Housing Estate, Ilaro	100	Turnkey	Low, Medium
28	Teachers‟ Village, Abeokuta	300	Core Housing	Low, Medium
29	Health Workers‟ Estate, Abeokuta	300	PPP	Low, Medium
	Total	1166		

Source: Ogun State Ministry of Housing (2008**)**

* Completed at the time of survey

urban development and the environment. Specifically, the Ministry is involved in the evolution of the Ogun State Housing and Urban Development as shown in Table 2.5. The Ogun State Ministry of Housing like most government ministries and agencies in Nigeria carries out its programmes and activities in seven different Departments of Housing, Architectural Services, Planning, Research and Statistics as well as Public Buildings. Others are Administration and Supply, Electrical Services and Accounts. In each of these Departments are core civil servants consisting of professionals, seasoned administrators, technicians, secretarial staff and tradesmen

2.5 Summary of the Chapter

This Chapter has introduced us into the contextual background of the study by giving detail information on the study and study area- Ogun State. It provided information on geographical and demographic characteristics of the State. It also gave insight into the evolution of provision of public housing in Nigeria with particular emphasis on Ogun state. In addition, the Chapter highlighted the objectives and trend of public housing provision in Ogun State by the selected public housing agencies responsible for provision of housing in Ogun state. The next Chapter discusses review on the current literatures on public housing and related issues that are relevant to the study.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

The Chapter provides a theoretical framework for the study and synthesizes the current literatures on public housing and related issues that are relevant to the study. It helps in identifying existing gap in literature, which this study attempts to fill. However, it must be stated that this review is eclectic due to the fact that there are limited works in this area.

3.2 Housing Generally

Housing is an economic resource providing space for production and access to income-earning opportunities (Agbola, 2005). At the housing unit level, housing is perceived as a safe and intimate provider of major psychological need and also represents a refuge from the outside world (Bonnefoy, 2007).The performance of this sector is often the barometer by which the health or ill health of a nation is measured or determined. Therefore, for any nation, housing is a set of durable assets, which account for a higher proportion of a country's wealth and on which households spend a substantial part of their income (Agbola, 1998). Averagely, according to Bruning, Langenhop and Green (2004), housing is the single largest expenditure in American household budgets. Its satisfaction has hence been justifiably described as one of the variables that affect life

satisfaction and Public housing is a form of housing provision that relies on the use of public funds in providing housing to citizens.

The current and future prospects in the housing sector depend on the extent to which owners or occupiers are satisfied with the built facilities. This emphasis is based on the fact that many problems in the built environment are the result of neglecting the users' point of view. Lahdenpera and Tiuri (1999) noted that customer satisfaction is not only a matter related to the hand-out of a freshly completed building, but is a life-cycle issue which has to be taken into account right from the initial investment phase. There is therefore need to first of all understand and establish what the consumers' want (real and perceived need) and only then could such expectations be met.

Housing as a process includes the provision of houses, how people become housed and the role that the house plays in the life of the individual, the family and the society as well as how the houses are maintained (Mmakola, 2000). Housing as a process also emphasises the importance of housing in job creation and economic development (Cornelissen, 2001). Housing as a process is ongoing and it suggests that people should get involved in the construction of their own homes. This refers to participation in the different phases of housing construction. Participation might lead to the formation of small construction companies as a result of the skills that participants acquire during the process (Cornelissen, 2001).

As a process housing construction needs to be implemented successfully. For successful implementation to take place, housing should also seek to create a unique place of belonging for occupants. Housing is also a commodity that can be produced and exchanged in economic transactions. From an economic perspective, housing represents

the largest financial investment most households make in their lifetime. As a social or collective good, housing is the centre of relations in a community. It defines social positions of different members of society of the economy; housing includes services such as water and sanitation, which makes environments habitable (Mmakola, 2000).

Van Vliet (1998) emphasised that there are other important functions that housing fulfils. At the household level, housing provides physical enclosure for domestic behaviour- a place where occupants have privacy for their daily activities, where they can cook, eat, socialise and rest away from the outside world. Housing forms a basis for individual, family and community activities where there are interactions with neighbours, work-related activities, schooling and shopping.

Housing entails more than a physical structure and having a roof over one's head. It is also a place that people make a home and to which they become emotionally attached.

3.3 The Role of Public Housing

Cornelissen (2001) emphasised that housing plays a major role in enhancing the quality of life for low-income groups and defined public housing as a form of housing provision that relies on the use of public funds in providing housing to citizens. Due to the intricate nature and multiplicity of stakeholders involved in public housing provision, a considerable quantum of research efforts has been directed on various aspects of public housing. These include public housing policy, institutional framework for provision and management of public housing, public housing finance as well as public housing schemes and their outcomes. The construction of formal housing structures moves low-income groups away from informal settlements and shacks dwelling to

formal houses, better-constructed neighbourhood and into communities. Cornelissen (2001) also concluded that housing should provide habitable environments with adequate infrastructure. There should be a safe delivery of housing opportunities. When housing is adequately provided it ensures the provision of social services and encourages the establishment of sustainable communities (Ralegoma, 2004).

Rukwaro and Olima (2003) identified aspects that developers and authorities should consider when a housing development is planned. These aspects are physical planning (planning for land use), management of assets and resources, development control of the area buildings car parks, informal settlements and security (community policing neighbourhood watches). Infrastructures (road, transport systems, street lighting, water, sewerage, solid waste management) and social welfare (health facilities such as public health centres, primary health care facilities and school) are also included. Social welfare also includes issues affecting society, such as homelessness, unemployment and public transport and the environment.

It is important to determine the satisfaction of occupants that live in low-income housing developments. The evaluation of residential satisfaction is very important in any housing project as it presents to developers the views, perceptions and preferences of housing occupants.

3.4 Performance Evaluation and Residential Satisfaction

According to Rossi et al., (2004), evaluation is a multi-disciplinary endeavour, and as such each discipline defines evaluation based on its disciplinary perspective. Nevertheless, there is a consensus among authors that evaluation is a study involving

collecting, analyzing, interpreting and reporting information on a thing, place, process or event (Stufflebeam, 1999; Purdon et al., 2001; Bennett, 2003; Rossi, et al, 2004; Rowe and Frewer, 2004; Bamberger et al, 2006). Performance evaluation of built facilities (housing inclusive) had often been based on how well the physical structure conforms to design specifications. Mohsini (1989); Torbica and Stroh (1999) identified that this approach is meaningful though not without limitation, because the main concern of the occupants is how the constructed facilities meet their needs and expectations. The current and future prospects in the housing sector depend on the extent to which owners/occupiers are satisfied with the built facilities. This emphasis is based on the fact that many problems in the built environment are the result of neglecting the Post Occupancy Evaluation (POE) from the occupiers' satisfaction approach.

According to Djebuarni and Al-Abed (2000) and Mohit et al. (2010), residential satisfaction is defined as the feeling of contentment which one has or achieves when one's needs or desires in a house have been met. It is an important indicator and planners, architects, developers, and policymakers use it in a number of ways. It has been used as (a) a key predictor of an individual's perceptions of general ''quality of life'', (b) an indicator of incipient residential mobility and hence has altered housing demands and affected neighbourhood change, (c) an ad hoc evaluative measure for judging the success of developments constructed by private and public sectors, and (d) an assessment tool of residents' perceptions of inadequacies in their current housing environment in order to improve the status quo.

According to Fancescato (1998) and Darkwa (2006), residential satisfaction is influenced by the occupants` perceptions of the various aspects of the house, the aspects of the

community and how the house and the community are managed. Occupants tend to make an immediate compares between previous dwelling and their present housing and that also influences residential satisfaction. In the evaluation of residential satisfaction certain characteristics, services and amenities in the residential environment may be identified that play a role in housing satisfaction. Residential satisfaction or housing satisfaction gives an indication of how people respond to the environment in which they live.

In Fancescato (1998), people evaluated performance of the environment according to their needs and this influences residential satisfaction. The relationship of people with their environment is based on the relationship between a person's characteristics (background, their feelings, beliefs, attitudes and behavioural tendencies) and the social and physical components of that particular environment. He stated that the residential satisfaction of occupants is often compared amongst themselves. Aspects of a housing environment that relate the most to residential satisfaction and the degree of satisfaction of residents with those, aspects, can be identified. The results of research can guide architects and developers in the planning of low-income housing developments. Research helps planners, designers and developers to improve living conditions, housing types, designs and construction of residential settings. This will lead to increased housing satisfaction of residents and improve unsatisfactory housing conditions, especially for low-income groups, because this group does not always have access to adequate resources. Amergo and Aragones (1997) observed that if occupants` attitudes towards their community are favourable and their levels of satisfaction are high, they will behave in a way which will beneficial to both the housing unit and the community. The occupants will contribute towards the maintenance of the housing units and the

neighbourhood and participate in community activities and events. Such occupants display higher levels of satisfaction.

3.5 Performance Evaluation of Housing Areas

Amergo and Aragones (1997) stated that residential satisfaction should be evaluated in low-income housing areas and amongst low-income groups, because these are the groups who cannot move away if they are dissatisfied with the areas or housing units they live in. Residential satisfaction is based entirely on the occupant's individual definition of residential quality. For instance one occupant's idea of good residential quality will be to have a toilet inside the housing unit whilst for another it may not be. Residential satisfaction also depends on culture and, in some cases, different socio-economic levels. Occupants usually compare what they consider to be high or good residential quality to the current residential environment in which they reside, when the gap between what they expect and what they have decreases, residential satisfaction increases.

The study also pointed out that psycho-social aspect play a bigger role in residential satisfaction than physical features. Therefore occupants of housing units display higher levels of satisfaction when they relate well with their neighbours and when they are attached to their residential environment. Resources like equipment in the unit and infrastructure, also influence residential satisfaction but to a lesser extent than psycho-social aspects.

The general idea of residential and neighbourhood satisfaction has become the prominent indicator of housing quality and condition which affect individuals' quality of life. These are used by numerous researchers, analysts, and housing providers as (i) an evaluative

measure of private and public sectors building performance, (ii) an indicator of residential mobility, (iii) an evaluation of occupants' perception of their residential environment and improvements in new projects, (iv) essential inputs in monitoring the success of housing policies, (v) a basis for taking decisions about improvements in current housing stock through 'feed-back' information and about the design and development of future housing through 'feed-forward' information, and (vi) a measure of accountability of housing managers, designers and policy makers (Oliveira and Heineck, 1999; Salleh, 2008 and Amole, 2009).

Theoretical underpinnings on residential satisfaction are based upon the idea that residential satisfaction measures the difference between households' actual and desired or aspired housing and neighbourhood situations (Galster, 1987). Households usually make their judgments about residential conditions based on their needs and aspirations. Satisfaction with households' housing conditions indicates the absence of any complaints and a high degree of congruence between actual and desired situations. On the other hand, incongruence between housing needs and aspirations may lead to dissatisfaction. Rossi (1955) postulated that changing housing needs and aspirations occur as households progress through their life cycle stages leading to residential dissatisfaction at some stage and they respond to this dissatisfaction through migration. Hence, migration is viewed as a process of adjustment with the essential purpose of increasing one's place utility or level of residential satisfaction (Wolpert, 1966).

Morris and Winter (1975 and 1978) introduced the idea of ''housing deficit'' and conceptualised housing satisfaction as a dynamic process. In their housing adjustment model of residential mobility, they theorize that households judge their housing

conditions according to two types of norms, personal or cultural, which may not coincide. An incongruity between the actual housing satisfaction and housing norms results in a housing deficit, which in turn gives rise to residential dissatisfaction, leading to some form of housing adjustments which may be either in situ such as revising their housing needs and aspirations in order to reconcile the incongruity, or improve their housing conditions through remodeling, or else they may move to another place and bring their housing into conformity with their aspirations or needs. However, both migration and in situ adjustments require that the households should have enough information about alternative adaptation opportunities and financial resources. Some empirical studies have demonstrated that housing deficit is a useful concept in explaining residential satisfaction and mobility behaviour (Bruin and Cook, 1997; Husna and Nurijan, 1987).

3.6 Importance of Performance Evaluation

Ha (2008) emphasized that Building Performance Evaluation should be a matter of particular interest to the public and private housing providers in seeking to increase the occupants' satisfaction and maximise value for their money. The achievement of quality is one of the key factors that contribute to the ultimate success of any housing project, beside cost and time.

Kishk, Al-Hajj, Pollock, Aouad, Bakis, and Sun (2003) outlined the components of Life Cycle Cost as initial capital costs, operation costs, maintenance costs, occupancy costs and residual values (including demolition and site clearance costs). Therefore, life cycle analysis (or life cycle assessment) is an integrated "cradle to grave" approach to assess the environmental performance of products and services (Bamfort, 2005). Since design is

to be done to meet specific functional requirements, the designers must endeavour to balance the requirements not only of his client but also of the facilities' end-users. The challenge, therefore, for the house building industry is to lower the initial and life cycle costs of housing but at the same time improve its quality and functionality (Barlow and Gann, 1999) towards occupiers' satisfaction.

Ilesanmi (2005) emphasised that evaluation of housing environment can be grouped into three dimensions, namely, physical, social and socio-physical dimensions. These dimensions of evaluation of public housing involve a number of activities. The physical involves the architectural attributes, spatial lay out and interrelationship of spaces as well as performance of space in meeting basic social, physiological and psychological needs of occupants (Fatoye and Odusami, 2009). Hanson et al., (2004) identified architectural (design, material performance, quality), sociological (residential satisfaction, impact on neighbourhood) and economic (cost effectiveness) as dimensions of evaluation of public housing, Hashim (2004) in a study of residential satisfaction and social integration in public low cost housing in Malaysia found that default in physical structure of houses and poor social and physical environments do affect social interaction among residents of public housing and surrounding neighbourhoods. Mohit et al., (2010) stated that occupants' residential performance is a measure of the degree to which a housing (quality) performance is meeting the occupants' expectation in terms of benefits and needs. At the conception of housing occupation, a consumer builds some expectations on the performance of the desired housing, the benefits it will provide and the needs it should fulfill. The judgement of these begins immediately after occupation, which in turn determines his level of satisfaction/ dissatisfaction. It is on this background

that the work of Bruning, Langenhop and Green (2004) considered housing satisfaction as the gap that exists between residential needs and aspirations and the current residential context. These may include residents' assessment of neighbourhood safety, ease of access to areas of interest, the quality of other homes in the immediate area, the desirability of the community, and friendliness/pleasantness of the people in the immediate neighbourhood.

3.7 Performance Evaluation Requirements

The design and management of dwelling facilities that help to improve the satisfaction of the users is a task that requires the explicit statements of performance requirements and effective management. For instance, the housing minimum standard set by the Korean Government is based on three factors (Ha, 2008):

(1) Minimum floor area for adequate space and privacy e.g. the dwelling floor space for a household of four persons must exceed 37.0m^2.

(2) Facilities i.e., provision of basic services: Any housing lacking basic services and facilities such as running water, electricity or a sewage system is judged to be below standard.

(3) Structure and environment: Housing with poorly built structures such as tents, commercial huts, and barracks using inadequate building materials are also considered to be sub-standard.

Housing performance evaluation through residential satisfaction approach is based on some performance measurement criteria as available in the literature. These criteria are all based on significant elements of housing and its environment, though they may vary in their arrangement and presentation. The work of Kowaltowski, da Silva, Pina, Labaki,

Ruschel, and Moreira (2006) in Brazil showed that the population of low-income housing in the Campinas region expressed high level of satisfaction with their housing conditions despite low feeling of security in the neighbourhood. Satisfaction rates were generally high but not directly related to physical elements of the home and its neighbourhood. According to Ukoha and Beamish (1997), the residents in public housing in Abuja Nigeria were satisfied with neighbourhood facilities such as closeness to schools, hospitals/clinics and shops/markets. They were however dissatisfied with their overall housing situation (structure types, building features, housing indications and housing management).

In Soweto, South Africa, the group from the squatter camp had the lowest levels of satisfaction with their personal and environmental quality of life. The group was found to be the most disadvantaged in this regard when compared with *the relocated*, the *awaiting relocation* and the *site tenure allocated* groups (Westaway, 2006). The findings of research carried out by Salleh (2008) in Malaysia about private low-cost housing indicated that satisfaction levels are generally higher with dwelling units and services provided by the developers than neighbourhood facilities and environment. The contributing factors for the low level of satisfaction with neighbourhood facilities and environment were poor public transportation and lack of children playgrounds, community halls, car parks, security and disability facilities. The development of housing, being in the hands of profit-motivated private sector who give less attention to the provision of neighbourhood facilities and environment was given as reason for this level of dissatisfaction.

Ha (2008) observed that the residents of social housing estates in South Korea were

satisfied with neighbourhood amenities (health clinics, stores, banks, post office, etc.) but highly dissatisfied with parking facilities and landscape architecture. A total of 51% of the residents were satisfied with their accommodation while about 11% expressed their dissatisfaction. The other residents fall between these two classifications.

In another dimension, the result from the investigation of Bruning, Langenhop and Green (2004) showed that relationship attitudes play a prominent role in respondent evaluations of living in a city. The study concluded that when compared with other more traditional evaluations of respondents' housing experience, the city-resident relationship is an important predictor of overall satisfaction.

3.8 Factors Affecting Residential Satisfaction

The literature is replete of analysis of many variables that are strongly related to residential satisfaction and the occupiers' evaluations of the variables. Some of these are: building features (such as number of bedrooms, size and location of kitchens, and quality of materials, etc.) and neighbourhood facilities (like schools, hospitals, shops, recreational facilities, etc (Amaratunga and Baldry, 1998; Torbica and Stroh, 1999; Salleh, 2008). The study of Ukoha and Beamish (1997) indicated that residents in public housing in Abuja, Nigeria were satisfied with neighbourhood facilities such as closeness to schools, hospitals/clinics and shops/markets. They were however dissatisfied with their overall housing situation (structure types, building features, housing indications and housing management). Kowaltowski, da Silva, Pina, Labaki, Ruschel and Moreira (2006) reported that the population of low-income housing in the region of Campinas, Brazil preferred houses to apartments and satisfaction with their housing conditions was high despite low feeling of security in the neighbourhood. Satisfaction rates in general

terms were high but were not directly related to physical elements of the home and its neighbourhood.

The work of Westaway (2006) in Soweto, South Africa, revealed that the group from the squatter camp had the lowest levels of satisfaction with their personal and environmental quality of life. The group was found to be the most disadvantaged in this regard when compared with *the relocated,* the *awaiting relocation* and the *site tenure allocated* groups. Kowaltowski *et al,* (2006) opined that quality of life was related to feelings of security, physical safety, and protection from the elements (wind, rain, lightening) and environmental comfort (thermal, acoustic, visual, and functional space). According to them, security and safety feelings were related not only to crime rates and the quality of policing, but also to street lighting and visibility of movements in public areas.

In the survey carried out by Ha (2008), the residents of social housing estates in South Korea were satisfied with neighbourhood amenities (health clinics, stores, banks, post office, etc.) but highly dissatisfied with parking facilities and landscape architecture. A total of 51% of the residents were satisfied with their accommodation while about 11% expressed their dissatisfaction. The balance was between the two opinion groups.

The findings of Salleh (2008) about private low-cost housing in Malaysia revealed that satisfaction levels are generally higher with dwelling units and services provided by the developers than neighbourhood facilities and environment. The contributing factors for the low level of satisfaction with neighbourhood facilities and environment were poor public transportation and lack of children playgrounds, community halls, car parks, security and disability facilities. The development of housing, being in the hands of profit-motivated private sector who give less attention to the provision of neighbourhood

facilities and environment was given as reason for this level of dissatisfaction.

Most empirical studies on residential satisfaction have used either one or a combination of the theoretical frameworks that have been stated above. A host of variables representing housing and neighbourhood characteristics, individuals' socio-demographic attributes as well as their perceptions of housing and neighbourhood conditions have been analysed in previous studies (Lu, 1999).

However, the effects of these variables as determinants of residential satisfaction or dissatisfaction tend to vary by housing types, tenure, countries, cultures and income group what stand to indicate that further studies are required until a general theory of residential satisfaction emerges. Lu (1999) also observed that residential satisfaction is a complex construct, affected by a variety of environmental and socio-demographic variables. Mastura, Nor Liza, Osman, and Ramayah (undated) in their cross-section study found that project type, house price and length of residency significantly influence housing satisfaction among the residents of Penang Development Corporation's projects. Husna and Nurijan (1987) found that while the residents of public low-cost housing in Kuala Lumpur, Malaysia, were satisfied with the services rendered by the city hall workers and with the neighbourhood factors, a big proportion of them felt dissatisfied with dwelling unit characteristics. Nurizan (1993) reported that the residents of low-cost housing in Johor Bahru were only satisfied with public transport and distance of housing from the city but they were not satisfied with the size, rental and crowding in the house. Djebuarni and Al-Abed (2000) observed that the residents of public low-income housing in Sana'a,Yemen, attach great importance to the level of satisfaction with their neighbourhoods, particularly, with privacy which reflects the cultural background of

Yemeni society. Lane and Kinsey (1980) reported that housing characteristics were more crucial determinants than demographic characteristics of housing occupants.

Halimah and Lau (1998) compared the perceived concept of home aspired between Malay and Chinese housewives in low-cost housing in Selangor and found that there were significant differences between the Malays' and Chinese perception of home and housing satisfaction. Ogu (2002) studied urban residential satisfaction of inhabitants living at core, intermediate, suburban, and planned areas of Benin City, Nigeria, and found that while most housing component variables generally contributed positively to residential satisfaction, environmental variables made negative contributions. Salleh (2008) investigated residential satisfaction in two states – Pulau Pinang and Terengganu, and found that the neighbourhood factors as the dominant factors affecting the levels of housing satisfaction in private low-cost housing in Malaysia.

Oh (2000) in her study on housing satisfaction of middle income households in Bandar Baru Bangi, Malaysia, revealed that while the residents were highly satisfied with the space and price of the house owned, but they were not satisfied with the size of kitchen, plumbing, and public facilities such as recreational areas, playground, taxi and bus services in the housing area. Alison, Kearns, and Atkinson (2002), by analysing data on English Housing, concluded that although socio-demographic factors were much less important than residential perceptions in helping to predict dissatisfaction, the type of neighbourhood remained a significant independent predictor of dissatisfaction even when residents' views were taken into account. Dwellers in private low-cost housing in and around Bangkok, Thailand were generally satisfied with their dwelling units than with environmental facilities (Savasdisara, Tips, and Suwannodom, 1989).

3.9 Residential Satisfaction in Public and Private Housing

According to Lu (1999), public renters are more likely to be satisfied with their housing, because, firstly, there tends to be a basic level of amenity, service and maintenance provided for public housing tenants in their dwelling; and secondly, and probably more importantly, the satisfaction with the dwelling is influenced by the large housing estates where dwellings are of similar design, appearance and standard. Hence, public renters are more likely to have very low levels of neighbourhood satisfaction, because of the location and density of the public housing stock.

However, Mastura et al., (undated) in their study found that `both groups (owners and renters) have the same level of perception and aspiration on their housing and neighbourhood environment`. Baker (2002) has thus observed that location characteristics are important considerations for understanding the formation of residential satisfaction among public housing tenants. While housing is likely to be a source of satisfaction, elements of the neighbourhood such as the level of crime (Mullins, Western, and Broadbent, 2001) or lack of amenity (Fried, 1982) or industrial development or work place location are likely to be sources of dissatisfaction.

The foregoing review of studies on residential satisfaction indicates that while various housing, neighbourhood and household characteristics determine the level of residential satisfaction, the impacts of these variables as determinants of residential satisfaction or dissatisfaction tend to vary by housing types, tenure, countries and cultures what stand to indicate that researches or studies are required to determine residential satisfaction on case specific situation to guide public policies. In Nigeria, so far studies on public low-cost housing satisfaction were not focused on the public housing estates toward

formulating housing that will help in housing delivery systems and improve the residential satisfaction of the residents. Therefore, this research intends to fill the gap that currently exists in the public housing in Nigeria.

3.10 Users Requirement Studies on Residential Satisfaction

The housing structure, the environment and the larger community all play a role in whether or not people are satisfied with their residence and residential environment. Therefore, for the residential environment to be successful and for it to contribute to residential satisfaction, careful site planning is essential. Site planning occurs when developers and constructors plan where they will build the residential area and determine how far it will be from other amenities. This will create a well-balanced environment (Nelischer, Perkins and Smith, 1997).

Francescato (1998) emphasised that the environment extends beyond the physical factors, namely the house, the housing development and the community, but it includes social and economic factors. Social factors (social environment, social characteristics of the community, density and the private outdoor areas) and economic factors (income and socio-economic background of residents) can increase or improve satisfaction levels of housing residents. If residents are satisfied with the services, and other aspects in the community meet their needs, they will continue to live in that residential environment. Therefore, these services and amenities can provide an indication of residential satisfaction.

Yang (2004) suggested that residential satisfaction is affected by objective variables such as the housing and environmental conditions which include the quality of the

neighbourhood, social environment, physical environment, quality of and access to community services, and the quality of the residence, home ownership and location of the residential environment. The household's demographic composition such as age, gender, income and parental status of occupants are also objective variables that can influence residential satisfaction. Physical form, which is an objective variable, can directly influence residential satisfaction through aesthetic and functional appeal and may indirectly affect satisfaction through the influence on access to services and social interaction. Yang (2004) added that environmental characteristics are social and organizational aspects like social interaction among occupants, children`play area, activities such as tenant meetings, different organisations for the community, stokvels (community saving schemes) and formal informal social gatherings of residents also influence residential satisfaction. The two prominent variables that affect occupants` rating of satisfaction are age and income. Satisfaction is said to increase with the age and income of the occupants (Shaw, 1994).

Fracescato (1998) reported research conducted in Sweden on residential satisfaction of low-income households who had no platform to air their views. These households were neglected by the housing sector, their needs, housing expectations and interest could not be voiced, under normal circumstances, because they did not have adequate access to the housing market. Despite the housing shortage for low-income households, the research indicated a high incidence of vacancy in high-rise housing developments provided for the low-income. It concluded that occupants were not satisfied with these houses and instead decided to return to the slums. This was also the case in South Africa where occupants of RDP houses in Khayelitsha, Cape Town, sold houses at a loss and returned

to their shacks (Breaking New Ground on Housing Delivery, 2004).

In a Post Occupancy Evaluation study made by Liu (1999), to determine the residential satisfaction of occupants of a public and a private housing estate in Hong Kong, it was observed that social status reflected respondents` perceptions of residential satisfaction. The research found that residents with a high social status who lived in private housing estates were more satisfied with their houses than those with lower social status who lived in public estates. The researcher recommended that developers and designers should put into consideration the difference in the levels of satisfaction between occupiers of privately owned estates and public housing estates in the provision of housing estates.

The study also investigated the adequacy of daylight and natural light in housing units and lighting levels of public areas in the housing estate. The residents were satisfied with the position of the windows, privacy from neighbours, ventilation and amount of natural light inside their houses. This influenced their levels of residential satisfaction.

On the evaluation of the durability of building materials and sanitary fittings, the study revealed that respondents were dissatisfied with the maintenance and cleanliness of the building estates and quality of the building materials.. The researcher recommended that housing authorities should pay attention to the final housing product delivered by developers. However, he added that it is important to note that the expectations and needs of occupants change over time and with this factor in mind, housing units should provide for adaptations and extensions.

In another study conducted by Turkoglu (1997) in Istanbul, Turkey, six factors were identified that need to be evaluated when determining the levels of satisfaction of

occupants of housing units. These factors include the size and physical condition of the dwelling, accessibility to the city centres, the work place, hospitals and shopping centres as well as the provision of municipal services. Furthermore, the availability and maintenance of social, recreational and educational services as well as social and physical and environmental problems, climatic control of the dwelling and level of interaction with neighbours are all aspects to be evaluated when determining levels of satisfaction.

The results of the study indicated that occupants of formal housing units had higher levels of housing satisfaction than those in squatter homes. The results from the regression analysis depicted that residential satisfaction was mostly based on satisfaction with the dwelling and the neighbourhood. The result also indicated that positive physical conditions in a housing unit resulted in higher levels of satisfaction. Physical conditions include perceived physical comfort, maintenance and appearance of the housing complex, layout and the size of the house. Occupants were less satisfied with the community if physical problems were present, for example noise, air pollution, and unsatisfactory climatic conditions of the housing unit. Attributes that influenced residential satisfaction were positive such as Location, as well as accessibility to other amenities of the housing complex. These amenities included accessibility to facilities such as the workplace, shopping centres, municipal services and the city centre.

In a related study conducted by Abu-Ghazzeh (1999) on social interaction in a neighbourhood, it reported that residents rated the neighbourhood, and the community high in their levels of residential satisfaction. The relationships, which residents had formed in the community, were of significance. The researcher showed that social

interaction with other members of the community was based entirely on whether the occupants chose to interact with others or not. The more neighbours communicated, talked about problems and borrowed things from each other the closer they became. If community members knew each other by name, lived within close proximity to each other and had friends in the community, they had higher levels of satisfaction with the community and with their social situation. The above researches results indicate that an opportunity for social contacts, proximity to others and space for interaction all enhance social interaction. A combination of the population size, density and social heterogeneity are factors that influence social interaction. This influences who interacts with whom and where.

Furthermore, the design of outdoor spaces also affects the patterns of interaction in these spaces by residents. The amount of space between housing units and spaces which residents share, determines which people meet and relate to each other. The more paths residents share, the more they are likely to meet. These paths lead to and from housing units to activity sites such as shops, taxi ranks and routes to the centre.

It was concluded that most social interaction took place in the streets, parking lots, open spaces and entrances to the units. Even neighbours, who did not know each other well, greeted one another when they met in the streets. Walkways provide an opportunity to view the surrounding and landscape and to get close to the neighbours.

Abu-Gahzzeh`s (1999) results further indicated that children`s play areas were social areas for both parents and children, especially for mothers whilst supervising their children playing. Noise levels influenced levels of satisfaction. Occupants who lived closer to the play area were more affected by noise. Noise levels were found to be

highest during summer, after school hours and during school holidays. Noise which particularly annoyed and affected occupants were moving furniture, shouting, closing doors, loud noise, drilling and jumping on stairs. The topography of an area determines the spatial structure and open spaces for social interaction in a neighbourhood. Therefore the community should be designed in such a way that it flows, has a transition between various public spaces and that occupants are not isolated from neighbouring areas.

In a study conducted by Rukwaro and Olima (2003) on Clay City Estate in Niarobi, occupants identified the provision of roads, security lighting, drainage and sewerage facilities, adequate parking facilities, security in the environment and proximity to social amenities as aspects that contributed to their levels of satisfaction. Occupants felt that if there were adequate roads to and from the estate, this area would be less congested. Adequate lighting in all areas such as the roads, the premises and gates and external walls of the building would reduce crime by exposing potential offenders. Sewers and drainage provision and maintenance and management were the responsibility of occupants.

These researchers further reported that social amenities for example schools, nurseries, playgrounds, hospitals, clinics, community halls and entertainment areas should be included during the planning and implementation of the development. The research in Clay City Estate in Nairobi found that occupants of a housing unit might be dissatisfied with the housing process.

3.11 Housing Policy of Ogun State Government

During the administration of Governor of Ogun State Otunba Gbenga Daniel between May 2003 and May 2011, a housing policy was formulated in recognition of the fact

that housing is one of the basic human needs of the people which has profound impact on people`s welfare, social growth and economic development. The goal of this policy is to "*ensure that all interested people in Ogun State own or have access to decent, safe and healthy housing accommodation at affordable cost"* (Ogun State Ministry Of Housing, 2008). The housing policy stems from the current approaches to solving the housing problem in the State based on the need to develop housing schemes that would ultimately create employment opportunities, generate wealth and provide shelter for the people, as well as improve on the urban landscape of the State. This policy is to improve socio-economic development and environmental sustainability in the State. The government, through the policy, intended to achieve the following:

(i) develop and sustain the political will for the provision of housing for the people in the State

(ii) provide adequate incentives and enabling environment for greater private sector (formal and informal) participation in the provision of Housing.

(iii) strengthen all existing public institutions involved in Housing Delivery at the State level.

(iv) encourage and promote active participation of other tiers of Government in Housing Delivery.

(v) Create necessary and appropriate institutional framework for Housing delivery.

(vi) Promote measures that will mobilize long term and affordable funding for the Housing Sector.

(vii) Strengthen the institutional framework to facilitate the effective Housing Delivery.

(viii) Promote the use of locally produced building materials as a means of reducing the cost of housing by government agencies setting the example.

(ix) Promote the use of Nigeria professional input in appropriate design and technology in housing delivery.

(x) Improve the quality of rural housing, rural infrastructure and environment.

(xi) Make easily available accessible and affordable land for housing development.

(xii) Promote the development of a State housing market

(xiii) Provide adequate fire services in the State

(xiv) Empower the State Ministry of Housing and other agencies of government.

(xv) Encourage Public/ Private sector partnerships e.g. in the Gateway City.

(xvi) Provide enabling environment for other participants e.g. Sparklight, Wemabod

3.12 Objectives of Public Housing Provisions in Ogun State

Public housing as used in this study represents all organized methods which Ogun State Government adopted in providing housing and related services to target population. It is basically derived from the State`s housing policy, and demonstrates the commitment of the State Government and her agencies to addressing housing problems in the State. In this study, the public housing provisions include the operational public housing programme, the housing delivery strategies used, housing programme theory and the different agencies involved in the actual provision of housing units and related services. In pursuant of the objectives of the State`s housing policy, Ogun State

government in 2003 initiated an integrated public housing programme known as the OGD Housing Programme. This public housing programme was designed to, among other benefits, enhance the following:

- evolution of appropriate institutional framework for housing delivery
- promotion of greater private sector participation in the provision of housing

3.13 Studies on Housing Policy and Delivery

Housing policy is a set of minimum standards and core policy guidelines in housing delivery which ensure that key bottlenecks are addressed, and basic needs are met (UN-HABITAT, 2006c). Omole, (2001) also defined public housing policy as comprehensive statements of intentions, ideas, strategies, guiding principles and philosophies put forward by government and international organizations to address housing challenges.

The aspects of public housing, which require a greater degree of evaluative research, such as housing consumer preferences, housing needs, public housing delivery processes and products, and the social correlates of housing, received only a token coverage. Except for a scattered array of projects, which investigated the activities of some state housing authorities, critical evaluation of public housing providers and their products, had been negligible. The few that did exist were not in-depth.

Ogunpola (1969) for instance, examined the functions, activities and achievements of the former Western Housing Corporation (WNHC) from an administrative perspective only; while Olateju (1980) attempted a review of the past activities, achievement and problems of the Lagos State Development and Property Corporation in the fields of housing, planning and urban development without regards to the occupants` satisfaction.

With regard to public housing in Nigeria therefore, empirical research has been meagre. Moreover, interest had concentrated on the economic aspects relating to low- cost housing and how low-income earners were dealing with their housing problems (Wahab, 1976; Onibokun, 1977 and Alalade, 1980). Issues of desirable public housing form, best location for public housing schemes, occupancy allocation, and effective utilization, management and maintenance of existing units, are prospective areas of further research for better understanding of public housing challenges.

Odumosu (1991) adopted an historical approach, which elucidated on the communal management of housing in pre-colonial Nigeria. Olugbesan (1998) in like manner, is a useful contribution to the housing discourse with emphasis that planning sustainable strategies for mass housing cannot be effective outside end-user involvement though he did not pinpoint factors responsible for these lapses.

Onibokun (1985), Awotona, (1987), Erguden (2001), and UNHABITAT (2006a, 2006c) examined what constitutes appropriate public housing policy and trends in the evolution of public housing policy. The findings of these studies show that there is no panacea for housing policy formulation, nor any globally accepted housing policy that best addresses local and national needs and conditions. In formulating relevant policies, efficiently implementing and monitoring them, institutional framework has been identified as one of the vital components in public housing provision (Federal Republic of Nigeria Federal Republic of Nigeria; UN-HABITAT, 2006b). It however noted that appropriate housing policy should provide effective framework for continuous decision making, and provide platform for maximizing options available to all socio-economic groups in meeting their housing needs without discrimination. UN-HABITAT

(2006c) particularly suggested that appropriate housing policy should simultaneously address supply constraints that is by getting more land, cheap credit and materials into the markets, increase effective demand by granting secure claims, and boosting employment and income generating activities, and ensures that interaction of supply and demand is not disadvantageous to any groups or lead to undue cost of housing.

Some studies also examined the institutional framework in public housing production and management in Developing Countries (Rondinelli, 1990), and found that increasing housing challenges in many Developing Countries has strong link to inappropriate institutional framework. These studies suggested the evolution and restructuring of the institutional framework for public housing delivery and management in line with current realistic approach to effective public housing delivery (Ademiluyi and Raji, 2008; Boyode, 2008; Chukwujekwu, 2005 and Hsieh, 2008).

Ogunshakin and Olayiwola (1972) in defending the need for mass housing continuity and redirection, traced the causal roots of the collapse of mass housing policy in Nigeria to the contradictions in the institutional mechanisms of decision making and implementation processes, rather than the essence of the policy *perse.* The import of this observation to the present study is the underlying need to evaluate not only the products of public housing (the housing estates), but also the institutional frameworks and housing delivery process of public housing corporations.

Agboola (1998) emphasised the conceptualisation of housing as both a product and a process, which encompasses a number of economic, sociological, and psychological phenomenon. Oruwari (1991, 1994, 2000) and Asiyanbola (2000) have contributed to the emerging conceptual issues in gender dimensions of housing studies. Also, Aribigbola

(2000) highlighted some other conceptual issues in housing provision as a basis for appraising past policies and programs for housing provision in Nigeria. Though it identifies lapses in the implementation of past policies, the contribution is lacking in empirical background for a scientific study.

Nubi (2000, 2001), and Ajanlekoko (2001) examined public housing finance system in this country and found that poor funding was the bane of public housing delivery in Nigeria. The studies suggested re-engineering of public housing finance system for better results in the country.

Arayela and Falaye (2000) examined the recurring problem of inadequate housing supply in Nigeria, from the perspective of sustainable development, thereby prescribing an agenda on how to increase housing stock through the use of stabilized laterite bricks. There seems to be a growing trend of research in this direction, particularly into the use of locally sourced materials towards mass production of low-cost housing though without adequate consideration for the satisfaction of the occupants of the housing estates. Olotuah (2000) reiterated the social responsibility of government in housing and the dangers inherent in abdicating its social duties in housing provision.

There are some other relevant studies on processes and outcomes of public housing schemes in Nigeria. Examples are studies as social equity on provision of public housing (Ilesanmi, 2005), outcomes of different public housing delivery strategies (Awotona, 1990; Ajanlekoko, 2002; Nwaka, 2005; Akinmoladun and Oluwoye, 2007). On quality and quantity of housing units provided (Onibokun, 1985; UN-HABITAT, 2006d), (Gana, 2002; Mustapha, 2002) respectively. Other studies were on affordability and accessibility of housing units provided to low-income people (Mba, 1992; Mbamali and Okoli, 2002;

Oruwari, 2006). The consensus in these studies is that process and outcomes of the different strategies in public housing in Nigeria have not yielded expected result, most particularly in the provision of adequate number and quality of affordable housing units that meet the socio-economic, cultural and physiological needs of residents.

In evaluation of public housing, the most common satisfaction studies are housing or residential satisfaction. Although the two are closely related, Kaitilla (1993) noted that theoretically, residential satisfaction deals with household satisfaction with both the house as a distinct physical object on the one hand, and the neighbourhood on the other hand. Similarly, Onibokun (1974) and Hashim (2003) indicated that residential satisfaction encompasses both housing satisfaction and neighbourhood satisfaction. From these submissions, one can distinguish between these two concepts. Whereas housing satisfaction deals with satisfaction of housing occupants with a housing unit as a distinct physical commodity, residential satisfaction includes satisfaction with a housing unit as well as satisfaction with the surrounding neighbourhood. This implies that the former is concerned with satisfaction at a micro level of housing unit while the later deals with satisfaction at the macro neighbourhood level. Residential satisfaction therefore encompasses satisfaction with physical, spatial and social aspects of the residential environment.

This variation in definition notwithstanding, Ogu (2002) used the two concepts interchangeably. This suggests that practically, both connote the same thing, and thus one can be used as a surrogate for the other. For this reason and in order to achieve the aim of this study, the current study examines aspects of residential satisfaction as defined above.

Moreover, Salleh (2008) observed that building features, such as number of bedrooms, size and location of kitchen, quality of housing units were strongly related to residential satisfaction. Also satisfaction with neighbourhood facilities such as schools, health care, shopping and community social centre has been noted to be an important factor of residential satisfaction.

Also the system approach has been employed in studying residential satisfaction. Ilesanmi (2005) explained that Onibokun (1974) in using the system thinking to study residential satisfaction within urban areas in Canada conceived residential satisfaction as a system consisting of four interacting components. These are of the residents`, dwelling unit, environment and management which produce a housing situation that the resident`s component judges as satisfactory according to housing needs and aspirations. According to Onibokun (1974), the residents" component is at the heart of the model and acts as the recipient of all the feedback from the other components. The dwelling component is the housing unit which forms part of an environment where the unit is located. The environment component includes housing services and infrastructure as well as neighbourhood facilities. There is also the management component of the satisfaction model comprising the institutional arrangement under which public housing is administered, managed and maintained.

Drawing from the above conception, Jiboye (2010) noted that interaction of the different components of the residential satisfaction model acts as a stimulus to an individual who forms a cognitive image of oneself and each of the components in the residential system. Such a cognitive image formed by a resident through the perception process becomes the basis of one`s attitude and feelings towards each of the

components and the totality of feelings forms the basis of one`s satisfaction with his/her residential environment. Onibokun (1976) evaluated public housing with reference to physical and spatial qualities, architectural desirability, locational suitability and efficiency of management and administration frameworks. Hanson et al., (2004) identified architectural (design, material performance, quality), sociological (residential satisfaction, impact on neighbourhood) and economic (cost effectiveness) as dimensions of evaluation of public housing.

Nevertheless, there remains much room for research on the residential satisfaction and social correlates of housing in Nigeria. Studies have shown that social and cultural factors such as, family size and composition, stage in the life cycle, income, level of education, age, occupation, number of children, ethnic origin religious beliefs, do influence the relative satisfaction and habitability of people with respect to their housing units or estates (Onibokun, 1974 and 1976). This forms the premise of the research questions raised in the present study.

3.14 The Theoretical and Conceptual Framework

3.14.1 Theoretical Framework:

Residential satisfaction is a reflection of 'the degree to which (the inhabitants) feel (that their housing) is helping them to achieve their goals'. It refers to individuals' evaluation of the conditions of their current residential environment, subject to their needs, expectations and achievements (Hui and Yu, 2009). According to Salleh (2008), theories on residential satisfaction are based on the notion that residential satisfaction is a measure of the difference between occupants' actual and desired housing and neighbourhood situations whose judgements are based on their needs and aspirations.

Satisfaction with their residential conditions indicates the absence of complaints as their needs meet their aspirations. Consequently, they are likely to feel dissatisfied if their housing and neighbourhoods do not meet their residential needs and aspirations.

In the Expectancy-Value Model of Attitude proposed by Rosenberg (cited in Francescato, Weidemann and Anderson, 1989), evaluations were seen as strongly dependent upon people's expectations or beliefs that the evaluated object furthered or hindered the attainment of their goals. To be more specific, Morris and Winter (cited in Salleh, 2008) introduced the notion of "housing deficit" to conceptualise residential satisfaction. Their Housing Adjustment Theory, on which this study is based, contends that if a household current housing meets the norms, the household is likely to express a high level of satisfaction with housing and neighbourhood. An incongruity between the actual housing situation and housing norms results in a housing deficit which gives rise to residential dissatisfaction. Once their dissatisfaction with the current residence surpasses a certain level (the threshold level), they are likely to consider some form of housing adjustment (Salleh, 2008; Hui and Yu, 2009). The adjustment may be in the form of intention to relocate except for some socio-economic reasons.

3.14.2 Conceptual Models of Residential Satisfaction

Models are artefacts that explain the interaction of phenomena that make explicit the theoretical orientations and the assumptions underlying the research. Literature reviews shows that various theoretical models have been proposed to guide research into residential satisfaction (Francescato et al., 1989; Galster, 1987) a few of them have been tested empirically.

Building Performance Evaluation (BPE) grew out of Post Occupancy Evaluation (POE), an established research method to evaluate buildings at different levels of effort and sophistication after they are occupied (Preiser and Vischer 2005). According to the literature review, the first publication with the term ‘post-occupancy evaluation’ in its title goes back to the 1970s (McLaughlin, 1975). From the specific focus on this phase of building occupancy, the POE process model was expanded into an integrative framework for building performance evaluation (Preiser and Schramm, 1997). An important feature of this framework was the time dimension, which took into consideration the complex nature of performance evaluation in the building delivery cycle, as well as the entire life cycle of buildings. The six phases of the 1997 ‘integrative framework for BPE’ are: (1) strategic planning, (2) programming, (3) design, (4) construction, (5) occupancy,(6) adaptive reuse/recycling as shown in Figure 3.1

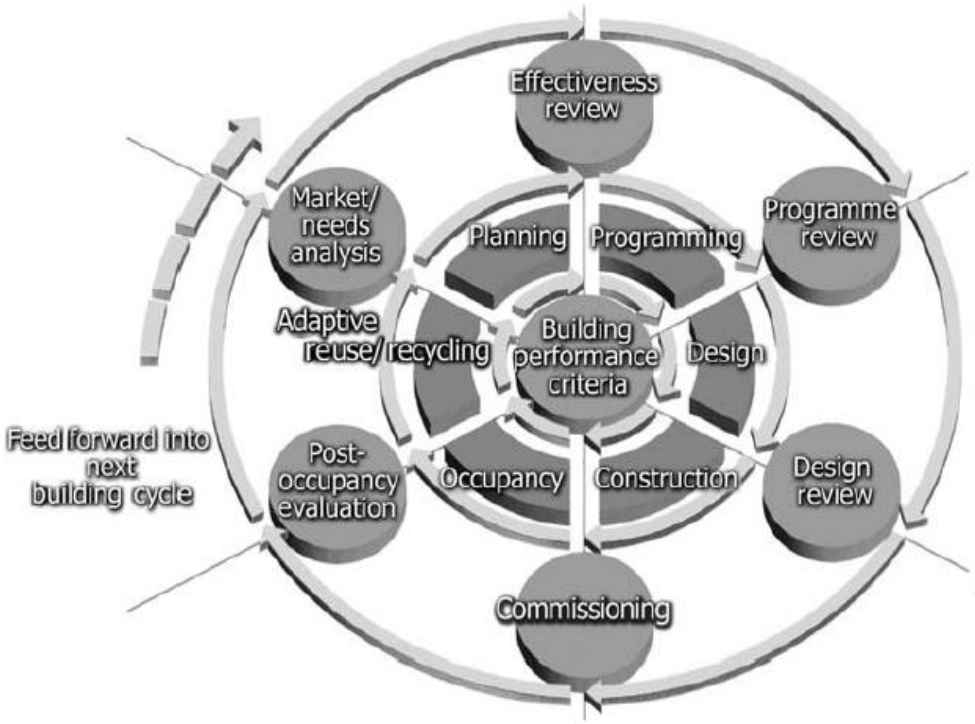

Figure 3.1 Building Performance Evaluation (BPE) process model
Source: Jay Yocis (cited in Preiser and Vischer 2005) .

The BPE framework draws on a model of continuous quality improvement to encompass the design and technical performance of buildings, and to contribute to knowledge-building in the design and construction industry. This comprehensive approach to building performance evaluation is applicable to all facility types. For a given building type, location and cultural context, the expected performance of the building needs to be defined and communicated to those who programme, design, and, ultimately, operate the facility. It is important to remember that the physical and technical performance of buildings is directly linked to the building qualities perceived by occupants. That is to say, occupants' perceptions are as significant as those building attributes that are defined by independent measures when a building is evaluated. A design has to be evaluated

according to how it is used and not on how it appears to the designer. The six phases of building performance evaluation (BPE) are presented as categories for specifying expected quantitative and qualitative performance scales for different types of built environments. These are based on types and numbers of expected users, space-use patterns, health, safety and security criteria, functional criteria, social, psychological and cultural criteria, ambient environmental conditions, spatial relationships, equipment criteria, code criteria, special requirements, and last, but not least, estimated space needs (Preiser, Rabinowitz, and White, 1988). BPE constitutes an important step in validating performance standards that may already exist, or that have to be developed for a given building type.

A man-environment interaction model comprising four subsystems-the tenant, the dwelling, the environment and the management was proposed by Onibokun (1974). Satisfaction with housing was conceived as being relative and influenced by satisfaction with all other subsystems. Applying the model in a study allowed attributes contributing significantly to overall and subsystem satisfaction to be identified by the construction of indices. Galster and Hesser (1981) developed an explanatory theory of residential satisfaction and used this in the specification of a path model in which objective or compositional characteristics of households and the context of their dwellings and neighborhood are seen as influencing their overall residential satisfaction. These objective variables were modeled as affecting satisfaction, both directly, and also indirectly, through the mediation of additional subjective evaluations of detailed features of the residential physical and social environment and the respondents` sense of anomie.

The model proposed by Weidermann and Anderson (1989) attempted to develop on, and integrate the past formulations, by including aspects such as person characteristics, attitudinal and affective variables, and intentions to behave with respect to the environment. Its limitation however, is in the interpretation of satisfaction in purely affective terms, failing to see satisfaction as an independent criterion relative to behaviour.

Considering these perspectives together, it is possible to generate a model of residential satisfaction in which cognitive (perception, evaluation, beliefs), affective (satisfaction), and conative elements (modification of the residential environment, residential mobility) are combined to explain the relationships between individuals and their residential environments. Francescato et al., (1989) proposed a a comprehensive model to reconcile the mutually contradictory notions in past models, by integrating the relationship between the residential environment, satisfaction, and behaviour, in accordance with the attitudinal approach proposed by Ajzen and Fisbein, (1980) in their theory of " reasoned action"

Some evaluations have attempted to determine which housing modernization strategies were more likely to increase the resident` satisfaction with their housing environment (eg. Edward, Kaha, and Anderson, 1985; Selby, Westover, Anderson, and Weideman, 1987). These were aimed primarily at predicting the likely success of specific interventions, hence did not necessarily include external variables. The usefulness of the above distinction is to the effect that: housing research- as the present study represents-is not primarily aimed at mere prediction of preferred interventions. Rather, the results are expected to augments our understanding of the phenomena under study, that is, to yield

knowledge that can be generalized to similar situations elsewhere. The model of Francescato et al., (1989) is therefore considered most appropriate for adaption in this study.

However, the systemic attitudinal model presented by Amerigo (1995) offers additional useful insights. According to this model once the individual has evaluated objective attributes of the residential environment, they become subjective, eliciting a certain degree of satisfaction. However, objective attributes of the residential environment can also directly elicit satisfaction (Galster and Hesser, 1981)

According to Amerigo (2002) the concept of residential environment includes three distinct dimensions; the dwelling, the neighbourhood, and the neighbours. This in turn, implies two dimensions of possible inquiry; one physical, which refers to structures and services, and the other social, concerning social networks.

Moreover, subjective attributes depend on how individuals perceive or value the objective residential environment. This evaluation depends, on the hand, on individual`s own socio-demographic and personal characteristics and, on the other hand, on the "standard of comparison" (Marans and Rodgers, 1975). This standard is essentially of a normative nature and encompasses a range of elements such as needs, expectations, levels of aspiration, reference group, and values.

The consensus of the various models is that the following have significant relationships with satisfaction:

(a) Objective and subjective measures of the dwelling units: objective measures refer to measures of the type of residence, the dwelling layout, the size of rooms and the density in terms of occupancy per room. Subjective measures refer to the appearance of the

dwelling, the spatial configuration, and perceptions of privacy, safety and degree of control of personal space.

(b) Objective characteristics of residents (and sometimes subjective measures of other residents).

(c) Subjective measure of management

Early satisfaction evaluation studies failed to discriminate amongst user groups as a means of explaining variations in responses of the residents (Onibokun, 1974); Greenberg 1977). More recent studies, however, have attempted to show that demographic variables and personality characteristics such as age, sex (Spencer and Hasser 1981, Galster 1987) and social and economic indices (Amole and Mills Tettey, 1998) influence satisfaction and length of stay in the residence.

Some researchers, notably Gutman and Wesergaard (1974), Francescato et al., (1981) and Zimring et al (1980) have gone further to suggest that evaluation studies should also consider the responses of other people who may in one way or the other be affected by the building. This category of persons may be administrators, estate managers, maintenance staff or neighbours. Studies have shown significant differences between the responses of residents and official staff in their evaluation of management and maintenance factors (Francescato et al, 1979).

3.14.3 Explanation of the Conceptual Framework

The conceptual framework (see Fig. 3.2) employed in this research integrates the concept of Building Performance Evaluation on Government policy and satisfaction in the context of housing delivery. The concept of BPE not only enables an evaluation of the

institutional framework and housing delivery process of the corporation; it is also appropriate and useful in the evaluation of the public housing schemes, at both the levels of the housing units and the neighbourhood in Ogun State. The components of the framework follow the conceptual models of residential satisfaction by Galster and Hesser (1981), that is based on attitude theory, proposed by Francescato, Weidemann and Anderson (1989), and the systemic model of Amerigo (1995) as explained by Ilesanmi (2005) and Mohil et al., (2010)

These theoretical and conceptual foundations suggest that the overall degree of residential satisfaction is ultimately influenced by two sets of objective factors. One set may be considered "contextual"; the physical characteristics of the individual`s housing unit and physical and social characteristics of the surrounding neighborhood. The second set "compositional" characteristics of the individual household, including personal or demographic attributes, socio-economic status, household size, and duration of residency. According to Amerigo and Aragones (1997), objective attributes of the residential environment, once they have been evaluated by the individual become subjective giving rise to a certain degree of satisfaction. Subjective attributes are influenced by the subject's socio-demographic and personal characteristics as well as his/her residential quality pattern, a normative element whereby the individual compares his/ her real and ideal residential environment.

The model (Fig. 3.2) shows that the respondents' evaluation of objective attributes of housing through their socio-economic and demographic characteristics by Building Performance Evaluation (BPE) becomes subjective attributes which can be captured into

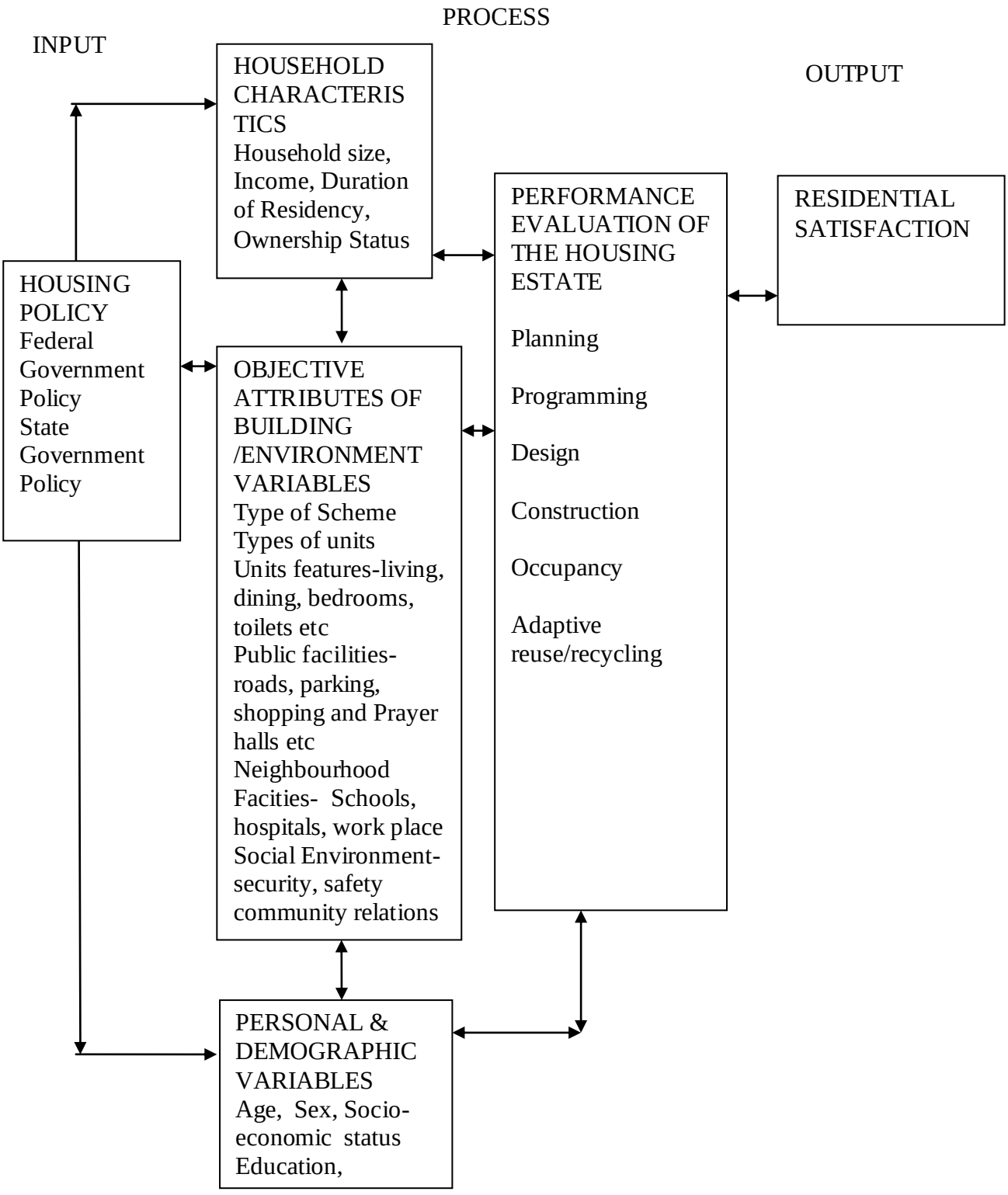

Figure 3.2: Conceptual Framework for the Study

Source: Author`s Concept (2010)

five components of housing satisfaction and these five components together form the basis of residential satisfaction of the inhabitants.

3.15 Summary of the Chapter

The Chapter has provided a theoretical framework for the study and synthesis the current literatures on public housing and related issues that are relevant to the study. It gave detailed information on studies that have been carried out on role of housing and its processes. It elaborated on the factors affecting residential satisfaction of the users of public housing and established that residential satisfaction is affected by objective variables such as the housing and environmental conditions which include the quality of the neighbourhood, social environment, physical environment, quality of and access to community services, and the quality of the residence, home ownership and location of the residential environment. The household's demographic composition such as age, gender, income and parental status of occupants are also objective variables that can influence residential satisfaction. Physical form, which is an objective variable, can directly influence residential satisfaction through aesthetic and functional appeals. It may indirectly affect satisfaction through the influence of access to services and social interaction. Finally, a framework model was developed, based on the literature reviewed to take care of the complexity of housing studies with its multidisciplinary nature.

CHAPTER FOUR

RESEARCH METHODS

4.1 Introduction

The Chapter discusses the approaches used in achieving the aim and objectives of the study. It discusses the research design, study population, the sample frame, sample size and its characteristics, the sampling methods adopted, sources and instruments of data collection, data analysis and presentation. It explains the use of pilot survey for ascertaining the validity and reliability of data collection instrument (questionnaire)

4.2 Research Design

The study evaluated the performance of public housing estates in Ogun State and examined the delivery process of Ogun State Government Housing Estates and determined whether or not the State subsidized housing fulfil the initial design concept and the needs of the users. It investigates the levels of satisfaction among the residents of the Ogun State housing estates in terms of the housing units, the housing complex and the management of the complex.

There are three main categories of research design namely survey, experimental and *post facto* designs. Survey designs are cross-sectional and longitudinal design, experimental design are experimental with control and succession quasi-experimental design, ex post facto is a one-case design with researchers using symbols in such designs (Asika, 2005).

In this study, stratified random sampling was used to select the samples for questionnaire survey. The residents of the public housing estate were stratified according to their categories namely, one-bedroom, two-bedroom, three-bedroom to ensure that the subgroups in the population are represented in the sample in proportion to their numbers within the population.

The purposive sampling method was adopted in selecting respondents in the organisations involved in the planning and execution of the organisations‟ housing projects as were identified by the personnel and human resource departments of the organisations. The research is exploratory and descriptive in nature, employing qualitative and quantitative data.

4.3: Data Collection

This section explains the sources and methods of data collection.

4.3.1 Sources of data collection

The study obtained both primary and secondary data. Qualitative data was obtained from key management staff of (OPIC) responsible for decision-making by means of in-depth interview. Quantitative data was obtained by the survey of the existing low-income housing estates of the State government. The secondary data was derived from multiple sources such as published and unpublished materials in books, journals, encyclopaedias, magazines, research works, conference or seminar and working papers. Including, OPIC records, architectural and layout drawings of the housing estates and relevant publications. Others were housing programme brochures, review of government's official documents and statistics, web pages from the internet as well as reports of public housing activities in Ogun State in particular and Nigeria in general. The quantitative data obtained

was subjected to both descriptive and inferential statistics. The qualitative data was subjected to content analysis.

4.3.2 Methods of Data Collection

i) Use of Interview Technique

A personal interview is a direct face –to- face conversation between the interviewer and the respondent suited for small sample population with narrow geographical spread (Bernard, 2000). In this study, qualitative data was collected from key management staff of OPIC responsible for decision making, by means of in-depth interviews. Questions were asked to elicit information on organizational capacity, the public housing strategies used as well as the housing estates developed by the organisation . On organizational capacity, respondents were asked to rate the adequacy level of both management and resource components of their organizations on a 5-point Likert scale, where 1= very inadequate, 2= Inadequate, 3= fairly adequate, 4 = Adequate, 5= very adequate organizations.

ii) Administration of Structured Questionnaire technique

Questionnaire is an instrument that can be used to observe data beyond the physical reach of the observer (Leedy, 1997). In this study, quantitative data were collected by means of the structured questionnaire technique, which was adopted in eliciting information from 716 household heads of a stratified sample of housing units in the purposely selected public housing estates. The questionnaire was designed to give an assessment of the public delivery process as well as of the estate from the users` view point. The questionnaire form consists of six sections with household and house unit information (Section-1); satisfaction with dwelling unit features (Section-2); satisfaction with

dwelling unit support services (Section-3); satisfaction with public facilities (Section-4); satisfaction with social environment (Section-5); and satisfaction with neighbourhood facilities (Section- 6). In addition a separate section was devoted for the management of the agency.

The data collected was analysed using both descriptive and inferential statistics. Data presentation and analysis made use of frequency distributions and percentages of all the respondents. The respondents were asked to indicate the level of satisfaction/dissatisfaction using some selected quality performance criteria on a 1 - 5 Likert-type scale. The level of housing satisfaction was measured by using a five-point Likert scale – ‘‘1’’ for very dissatisfied, ‘‘2’’ for dissatisfied, ‘‘3’’ for slightly satisfied, ‘‘4’’ for satisfied and ‘‘5’’ for very satisfied.

iii) Personal observation of the selected public housing estates and housing units by the researcher was used for the assessment of the physical characteristics of the housing estates.

4.4 Sample Population of the study

Population of the study consisted of 907 housing units completed and occupied housing units in ten low-income public housing estates developed between 2000 and 2010 as shown in Table 4.1

4.5 Sample Frame

Sample frame refers to the complete list of all units of population under study and determines the structure of enquiries (Olaseni, Solola, Laoye and Alade et al., 2004 and Aledare, 2004).

The sample frame for this study consisted of 825 (91.0%) housing units out of 907 housing units completed and occupied housing units in ten low-income public housing estates developed between 2000 and 2010 as shown in Table 4.1

Table 4.1: Sample Frame of Estates Selected for the Study

S/No	Name of Etate	Category	No of units completed	No of housing units occupied	Percentage occupied and sampled
1	Asero	2Bedroom	209	200	95.6%
2	Gateway Media, Ajebo	2 Bedroom	154	135	87.7%
3	Workers Estate,Laderin	1 Bedroom	265	246	92.8%
4	Itarin,Ijebu Ode	2 Bedroom	39	33	84.6%
5	Agbara	2 Bedroom	50	46	92 %
6	Sagamu	2 Bedroom	56	48	85.7%
7	Ota	2 Bedroom	45	43	95.6%
8	Mowe	2 Bedroom	30	25	83.3%
9	Ikenne	2 Bedroom	29	23	79.3%
10	Igboewe, Ilaro	2 Bedroom	30	26	86.7%
		Total	907	825	91.0%

Source: Field Survey 2011

4.6 Sample Size

A sample size comprises the total number of population elements or sampling units that are selected (i.e. sampled) for investigation in a research study. (Olatunde- Aremu, 2004). In addition, Osuala (2001) emphasized that a good sample size must be a near

representative of the entire population as possible for the generalization of findings.

The sample size for this study consisted of 716 housing units already occupied for at least one year out of 825 housing units completed and occupied housing units in ten low-income public housing estates developed between 2000 and 2010 as shown in Table 4.2 .

Table 4.2: List of the Estates Sampled and Administration of Questionnaires

S/.No	Name of Estates	Category of estate	No of Units completed	No of housing units occupied and surveyed	Sample Size	Percentage of Sample Size %
1	Asero	Low income-2Bedroom	209	200 (95.6%)	184	92%
2	Gateway Media, Ajebo	Low income-2 Bedroom	154	135 (87.7%)	107	79.3%
3	Workers Estate,Laderin	Low income-1 Bedroom	265	246 (92.8%)	215	87.4%
4	Itarin,Ijebu Ode	Low income-2 Bedroom	39	33 (84.6%)	28	84.8%
5	Agbara	Low income-2 Bedroom	50	46 (92 %)	40	96.9%
6	Sagamu	Low income-2 Bedroom	56	48 (85.7%)	43	89.6%
7	Ota	Low income – 2 Bedroom	45	43 (95.6%)	38	88.4%
8	Mowe	Low income-2 Bedroom	30	25(83.3%)	22	88.0%
9	Ikenne	Low income-2 Bedroom	29	23 (79.3%)	21	91.3%
10	Igboewe, Ilaro	Low income 2 Bedroom	30	26 (86.7%)	18	69.2%
		Total	907	825 (91.0)	716	86.6%

Source: Field Survey, 2011

4.7 Sampling Techniques

Sampling is the procedure for choosing the sample units from a population. It is a common method of collecting data in a survey research. Although, there are a number

of sampling techniques available for selecting sample units that make up the sample and the techniques are categorized into probability non-probability Abosede (2000).The sampling technique most suited for the study was a combination of two techniques, namely: the quota proportionate sampling and purposive sampling techniques.

The proportionate sampling method was used in selecting the housing units. The purposive sampling method was adopted in selecting respondents in the organisations involved in the planning and execution of the organisations' housing projects as were identified by the personnel and human resource departments of the organisations.

4.8 Instrument of Data Collection

The quantitative data for this study were obtained by the use of structured questionnaire containing open and close- ended questions. There were two sets of questionnaire, one set for the public housing providers- OPIC and the other for the end users-the occupants of the public housing estates. The questionnaire covered the major aspects of the research objectives and the research hypotheses. These included statements on; the socio-economic characteristics of the respondents, information on allocation procedures, level of satisfaction with their housing units, neighbourhood, management, the estate in general. The details of the questionnaire are contained in the Appendix A

In addition, Thirty (30) questionnaires were administered on Administrative and Technical staff while interviews were conducted on key management staff of OPIC to elicit additional information.

4.8.1 Administration of the Data Collection Instrument

The validated questionnaires were administered to one respondent per housing unit

selected within the estates. The researcher and four (4) field assistants, who were trained for the purpose of the present study, administered the questionnaires. Though the questionnaires were designed to be distributed by the field assistants, filled by respondents, subsequently collected, in some instances, this was supplemented by personal interview, in cases in which respondents had limitations of language in filling the questionnaires by themselves.

4.8.2 Validation of Research Instruments

The validation of the research instrument was necessary in order to ensure that it measured what it was designed to measure within the context of the research objectives (Wheater, 2000). A research design is said to be valid if it enables the researcher to elicit the correct responses from sample subjects; otherwise, it is a faulty design and may not lead to correct findings (Asika, 2005). In this study, some of the variables considered consist of the personal characteristics such as age, sex, and household size, though had obvious face validity; content validity was carried out. Experts in the field of housing, planning, and social sciences assisted in vetting the measuring instrument objectively, in order to critically examine and determine the appropriateness of the items and indices drawn in measuring the variables included in the study. Their suggestions, corrections, and ideas were incorporated into the final production of the research instrument. Content validity was satisfied in terms of the instrument`s adequate coverage of the scope of the study.

4.8.3 Reliability of the Data Instrument

Reliability is defined as the consistency between independent measurements of the same phenomenon. It is the stability, dependability, accuracy, precision and predictability of a measuring instrument. Reliability is concerned with the consistency in the results given by the same instrument and this is tested using any of test-re-test technique, multiple (alternate) forms, split-half technique and Cronbach`s alpha test (Bernard, 2000; Asika 2005). The reliability of the instrument was determined by means of a test-re-test method before final use. This was accomplished by using the instrument to collect information from public housing estates in Ogun State in order to stimulate the socio-economic as well as contextual characteristics of the respondents. The instrument was administered twice on the same respondents within an interval of three weeks. Results obtained in first and second tests for all the variables were subjected to Spearman`s Rank Correlation to determine the reliability of the instrument. The coefficient of correlation obtained was 0.794, which was higher than the empirically acceptable coefficient of 0.70 for reliabilities in basic research (Cournoyer and Klein, 2000). In addition, minor areas that could have made the instrument unreliable were critically reviewed and necessary corrections made before administering the final copies of the questionnaires on the respondents.

4.9 Measurement of Variables

Three sets of variables were considered and investigated. They are; the criterion outcome of variable (Residential Satisfaction); subjective attitudes of respondents to aspects of the residential environment; and the external variables of objective environmental variables,

and residents` personal and socio-economic variables, and household characteristics.

4.9.1 Measurement of Residential Satisfaction

Residential satisfaction is conceived as a multidimensional concept in this study. It is viewed as a measure of people`s attitudes towards certain aspects of their residential environment. The concept is operationalized in this study as a multi-item index of both cognitive and affective measures, which is more likely than a single item to constitute a robust criterion variable in multivariate analysis. The index employed was composed of five (5) inter-correlated items to which respondents were required to indicate their degree of agreement or disagreement on a 5-Likert scale namely?

1. Are you generally satisfied with living in this estate?
2. Are you satisfied with living in this apartment?
3. Do you want to live here for a long time?
4. If you were to move, will you like to live in another place like this?
5. Will you recommend this place for a friend if he/she is looking for a place to live?

Responses to these five items were summed up to produce an aggregate score for residential satisfaction. However, relative rather than absolute values of residential satisfaction are more useful as performance criterion. Hence, the responses were further categorized into three classes, to determine their level of satisfaction namely; satisfied, neutral, and dissatisfied.

4.10 Instruments used for Measuring Residential Satisfaction

4.10.1Satisfaction Index

Satisfaction index for a particular housing component has been measured by using Eqn. (1):

$$SIc = \frac{\sum_{i=1}^{N} yi}{\sum_{i=1}^{N} Yi} \times 100 \quad \text{----------(1)}$$

where SIc is the satisfaction index of a respondent with the component c, of the residential environment, N is the number of variables being scaled under c, yi is the actual score by a respondent on the ith variable and Yi is the maximum possible score that i could have on the scale used (.Mohit et al., 2010) .

4.10.2 Residential Satisfaction Index

Residential satisfaction index is sum total of the component satisfaction indices (Eqn. (2)).

$$SIr = \frac{\sum_{i=1}^{N1} di + \sum_{i=1}^{N2} si + \sum_{i=1}^{N3} pi + \sum_{i=1}^{N4} sei + \sum_{i=1}^{N5} ni}{\sum_{i=1}^{N1} Di + \sum_{i=1}^{N2} Si + \sum_{i=1}^{N3} Pi + \sum_{i=1}^{N4} SEi + \sum_{i=1}^{N5} Ni} \times 100 \quad \text{----------(2)}$$

where SIr is the satisfaction index of a respondent with residential environment; ₦1, ₦2, ₦3, ₦4 and ₦5 are the number of variables selected for scaling under each component of residential environment, while di, si, pi, sei and ni represent the actual score of a respondent on the ith variable in the component. Di, Si, Pi, SEi, and Ni are the maximum possible scores for the ith variable in the dwelling unit features, dwelling unit support

services, public facilities, social environment and neighbourhood facilities components, respectively (Mohit et al., 2010).

4.10.3 Habitability Index

Habitability Index for the housing component has been measured by using Eqn. (3)

$$HIx = \frac{\sum_{i=1}^{N} ay'x}{\sum_{i=1}^{N} Ay'x} \times 100 \quad \text{----------(3)}$$

HIx represents index of habitability (Ogu, 2002) of variable x and N is the number of respondents (716), while ay^i x is the actual score on the five-point by the yth respondent on the xth variable. 'A' represents the maximum possible score that respondent y^i could give to variable x on the five-point scale (Mohit et al., 2010).

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4.11 Characteristics of the Residents

Respondents' characteristics are necessary not only for the classification of the respondents for purposes of analyzing their responses, but also research findings have suggested that compositional characteristics of residents are correlates of residential satisfaction (Galster and Hesser, 1981). The independent "external" variables that were studied include following personal, socio-economic, and household characteristics:

i) Sex: respondents were asked to indicate whether they are male or female; and scored with nominal numerical values of `0` = male and `1` = female.

ii) Age range: respondents were requested to indicate their ages in ranges of years.

They were categorized as: below25; 25-39, 40-54, 55-69, and above 70years old. These were recoded with rank values of 1,2,3,4 and 5 respectively, for analytical purposes.

iii) Marital status: respondents were requested to indicate whether they are married, separated, divorced, widowed, or single.

iv) Socio-economic status: respondents were requested to indicate whether they are in the low-income, lower-medium income, upper- medium income, or high- income categories. These were recoded with ordinal values of 1, 2, 3, and 4 respectively, for analytical purposes.

v) Nature of employment: respondent were distinguished between those that were public servants, private employees, self employed, student/unemployed, and the retiree.

vi) Educational attainment: was assessed based on the ranked attainment of primary, secondary, post-secondary, or post-graduate. These were recoded with ranked values of 1, 2, 3 and 4 respectively,

vii) Household size: provided information on the number of persons living in the housing unit.

viii) Length of residency: was to ascertain the number of years the respondent had been living in the housing unit.

ix) Ownership or tenure status: was to identify on what basis the respondent was residing in the housing unit: either as original purchaser, owner by transfer of title, one who inherited the property, or a rental tenant. These were ranked as 4, 3, 2, and 1 respectively,

4.12 Contextual Environmental Variables

The objective contextual environmental variables adopted in the conceptual framework for this study are described as follows:

i) Type of units (UNTYPE): basically refers to one of two types of housing units, based on the number of rooms per unit, namely: one-bedroom units (valued as`1`), and two-bedroom units (valued as`2`).

ii) Provision of housing facilities: is measured based on respondents` indication on a 5-Likert scale, of their agreement or disagreement to statements related to the adequacy or otherwise of the provision of the following facilities namely:

1. Provision of car parking
2. Provision of pedestrian footpaths
3. Road network on the estate.
4. Provision of children play spaces
5. Greenery and natural landscape

The average of the summation of the scores for these five variables is the measure of provision of housing facilities (HFAC).

iii) Security and safety: is a measured based on respondents` indication on a 5-Likert scale, of their agreement or disagreement to statements related to safety and security on the estate. The average of the summation of the scores for these three items is the measure of the variable "safety and security" housing facilities (HSAFE).

iv) Density: is a measured based on respondents` indication on a 5-Likert scale, of their agreement or disagreement to six statements related to perceived density and

level of communication on the estates. The average of the summation of the scores for these six items is the measure of the variable "density" (HDENS).

vi) Sense of security: is a measured based on respondents` indication on a 5-Likert scale, of their agreement or disagreement to three statements related to sense of community and neighbourliness on the estate. The average of the summation of the scores for these three items is the measure of the variable "sense of community" (HCOMM).

4.13 Data Analytical Techniques

The qualitative data for the study in respect of Objective 1, which related to the identification and analysis of the institutional framework and housing delivery of OPIC , were analysed by means of content analysis. The data related to the assessment of the physical characteristics of the housing estates (Objective 2), involved an expert rating of the estates. The socio-economic characteristics of respondents (Objective 3) were analysed with the aid of descriptive statistics. Inferential statistical techniques were used in examining the relationships of variables in Objectives 4 and 5 of the research, including tests of hypotheses. The results were supplemented by some qualitative explanations of differentiations on the categories of estates.

4.13.1 Choice of Techniques and Justification

The choice of the appropriate statistical techniques for analyzing the data collected is of utmost importance. One basic determinant of choice of technique is whether the statistical problem is univariate, bivariate or multivariate. The scale of measurement of the variables is also pertinent: whether they are nominal (categorical), ordinal (ranked),

interval, or ratio. These determine the use of either parametric or non-parametric statistical techniques.

The analytical techniques used in this study were chosen with these considerations in mind, and to ensure simplicity and clarity in the communication of the results. The following techniques were considered to be most appropriate for the nature of data collected for this study.

4.13.2 Frequency Distribution

Descriptive statistics was used in evaluating the values of the independent variables in the data set. That is, univariate analysis, , using frequency distribution tables, bar charts, pie-charts, and histogram, helped in the analysis of individual variables in isolation, for example: the frequency of distribution of each of the socio-economic characteristics of the respondents, most of which were either nominal or ordinal data.

4.13.3 Non-parametric Statistical Techniques

The Non-parametric statistical techniques utilized in this study are:

i) Pearson Chi-Square (X^2): this was used to analyze for associations between frequency distribution of nominal or ordinal variables.

ii) Contingency coefficient, a symmetric measure of association, which is complementary to chi-square test. The possible values vary between 0 and 1. While `0` represents no relationship and `1`, a perfect relationship.

4.13.4 Bivariate and Multivariate Statistical Techniques

These were used to explore the basic relationships between variables. This is the realm of

inferential statistics, which consist of objective methods of deciding whether the differences between categories of variables, relationship between variables, associations between frequency distributions, are significant, ie whether they are likely to be real, or whether they are more likely to have arisen by chance.

i) Cross-tabulation analysis

This aided investigation of the bivariate relationships between pairs of external variables, and between them and the predictor and criterion variables. It was particularly useful for nominal and ordinal variables, with few categories.

ii) Analysis of Variance (ANOVA)

This involved comparing the means of the test variable, for categories of the grouping (independent) variables, to ascertain whether there is any significant difference between the categories. In this study, the mean RSAT was compared between categories of some socio-economic characteristics of respondents (nominal and ordinal). This was used in the tests of hypotheses 2 and 3

iii) Coefficient of Determination

This represents the proportion of the variance of the dependent variable that is accounted for by the independent variable. It is useful way of determining the importance of a situation of correlation. It is computed as r-squared, where r is the measure of correlation, linear association or linearity between the variables.

iv) Correlation analysis

Correlation measures the degree to which two variables vary together. Correlation techniques are used to measure the character and strength of the relationship between variables. The most commonly used correlation methods is the Pearson correlation

coefficient for variables with interval or ratio measurement scales. Spearman`s rho method is the non-parametric equivalent of Pearson.

The correlation coefficient ranges from-1 through 0 to +1. A negative sign indicates a person who scores high on one of these variables tend to score low on the other. The absolute value of the correlation coefficient indicates the strength of the relationship with larger absolute values indicating stronger relationship.

The technique was employed in this study in order to determine the degree of relationship between the independent "external" variables and the dependent outcome variable. It was used to confirm the relationship between the external variables and the outcome variable (residential satisfaction). Correlation was therefore used in the test of hypothesis 1.

v) Multiple Regression Analysis

This was employed in examining patterns of relationship between a single outcome variable and a group of predictor variables. Together with correlation analysis, they are used to generate collection of statistics describing and estimating significance of relationships among a group of variables in this study. The multiple R-squared correlation coefficients representing the extent to which a group of predictor variable is correlated with a single quantitative outcome variable, is interpreted similarly to the simple r^2, the coefficient of determination. The unique contribution of each of the predictor variables to reducing prediction errors in the outcome variable is estimated through calculating partial regression weight (b weights). The b weights reflect the correlations between each of the predictor variables and the outcome variable when the correlations between all predictor variables in the model are taken into account (Wheater

and Cook, 2000).

4.14 Summary

This Chapter has discussed the research methods for carrying out the study. It is showed that both qualitative and the survey research methods were adopted for the study. Sample frame for the housing unit survey was 825 out of 907 completed and occupied housing units. A combination of questionnaire, oral interview and observation schedule was used as data collection instruments. Descriptive statistics was used in evaluating the values of the independent variables in the data set. The qualitative data for the study in respect of Objective 1, which related to the identification and analysis of the institutional framework and housing delivery of OPIC, were analysed by means of content analysis. The data related to the assessment of the physical characteristics of the housing estates (Objective 2), involved an expert rating of the estates. The socio-economic characteristics of respondents (Objective 3) were analysed with the aid of descriptive statistics. Inferential statistical techniques were used in examining the relationships of variables in Objectives 4 and 5 of the research, including tests of hypotheses. The results were supplemented by some qualitative explanations of differentiations on the categories of estates. The results of the analyses and tests as well as their implications are presented in subsequent Chapters of this thesis.

CHAPTER FIVE

DATA ANALYSIS, DISCUSSION OF RESULTS AND IMPLICATIONS OF FINDINGS

5.1 Introduction

This Chapter is concerned with the presentation and treatment of data obtained during the fieldwork. The analyses and discussion are related to the objectives of this study. The computation allowed for the scientific testing of the hypotheses set up for the research in order to determine their acceptance or rejection.

5.2 Evaluation of the Institutional Framework (Public Housing Agency)

This section examines the personal and socio-economic characteristics of the respondents in the selected public housing agency OPIC. These include their sex, age, marital status, socio-economic status, and educational attainment. This evaluation was done by means of structured in-depth interviews sessions with key officers of the Corporation in charge of its main departments. A total of Thirty (30) Questionnaires were distributed among the Administrative, Technical and Key Management staff of the Agency. The results were transcribed, and a content analysis of the qualitative data conducted and supplemented by secondary data from few relevant publications of the corporation.

5.3 Characteristics of Respondents (Public Housing Agency)

Out of the thirty (30) questionnaires administered on the respondents, representing the Technical, Administrative and management staff of the agency, which included one (1) Managing Director, two (2) Directors, four (4) Deputy Directors, three (3) Head of Departments, four (4) Deputy Head of Departments, nine (9) Senior Technical Staff, five (5) Admin Staff, two (2) Estate officers, only twenty five (25) completed questionnaires were retrieved. This represents 83% of respondents which is considered good enough to draw inference from for this study.

Table 5.1 Characteristics of Respondents (Public Housing Agency)

Respondent	**Questionnaires distributed**	**Questionnaires retrieved**	**Percentage %**
Managing Director	1	1	100%
Directors	6	5	83.3%
Head of Departments	7	6	85.7%
Senior Technical Staff	9	7	77.8%
Estate officers	2	2	100%
Admin Staff	5	4	80%
Total	30	25	83.3%

Source: Author's Field Survey (2011)

5.4 Educational Attainment (Public Housing Agency)

The educational attainment of the respondents used for the study is presented in Figure 5.1.

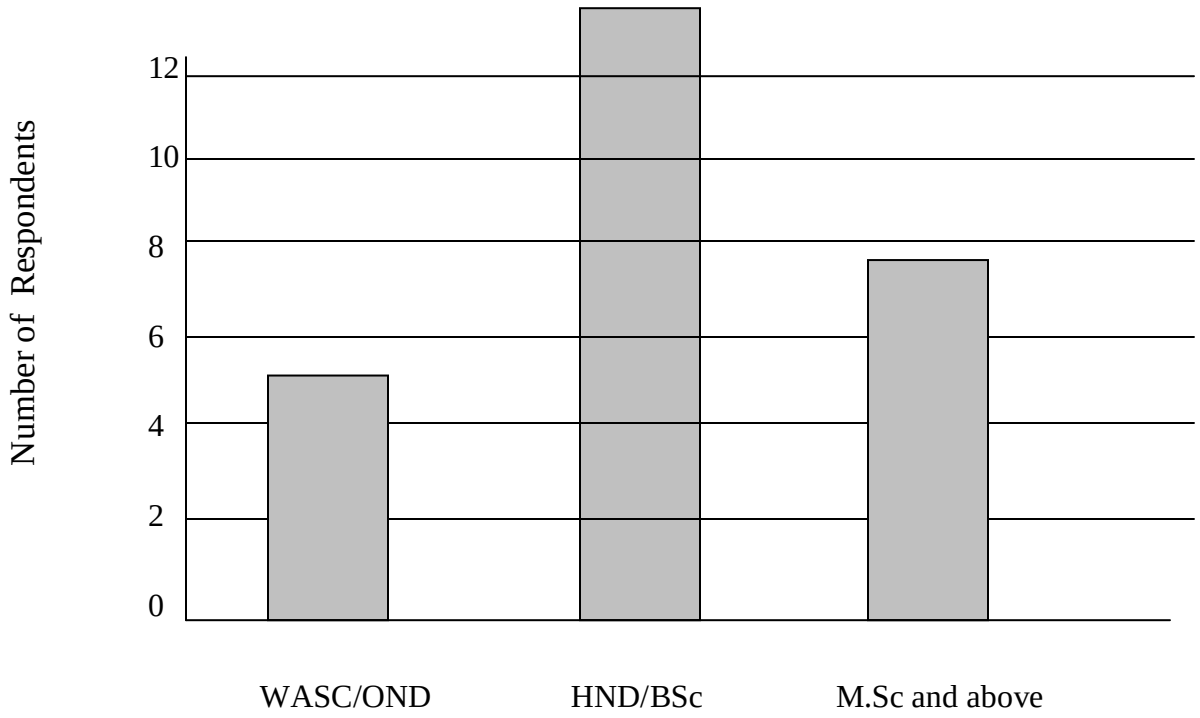

Figure 5.1 Educational attainment

The Figure 5.1 shows that thirteen (13) respondents have at least HND/BSc, seven (7) respondents have M.Sc and higher qualifications, while only five (5) of them possess WASC/OND. It shows that most of the respondents are highly qualified educationally.

5.5 Years of Experience of the Respondents (Public Housing Agency)

Table 5.2 shows the years of experience of the respondents interviewed in the housing estate provider OPIC

Table 5.2 Years of Experience of the Respondent

Period	Number of Respondents	Percentage (%)
1 – 10 yrs	11	44
11 – 15 yrs	8	32
16 – 25 yrs	4	16
26 yrs and above	2	8
Total	25	100%

Source: Author's Field Survey (2011)

Table 5.2 shows that seventy-two percent (76%) of the respondents have more than ten years of working experience in the construction industry, sixteen percent have more than sixteen years of experience and twenty percent (20%) have more than twenty years of experience. It can therefore be assumed that the respondents have good understanding of construction and housing delivery processes. .

5.6 Characteristics of Respondents (Public Housing Estates)

This section examines the personal and socio-economic characteristics of the respondents in the selected public housing schemes. These include their sex, age, marital status, socio-economic status, nature of employment, educational attainment, and geographical region of origin. The analysis is done, not in terms of frequency counts of the characteristics for the entire sample, but takes recognizance of the nature of the distributions of these characteristics across the ten sampled estates.

5.6.1 Public Housing Estates Selected for the Research Survey

The Table 5.3 shows the list of the selected public housing estates and the administration of questionnaires to the residents of these estates.

Table 5.3: List of the Estates Selected and Administration of Questionnaires

S/.No	Name of Estates	Category of estate	No of Units completed	No of housing units occupied and surveyed	No of Questionnaires Retrieved	Percentage of questionnaires Retrieved
1	Asero	Low income-2Bedroom	209	200 (95.6%)	184	92%
2	Gateway Media, Ajebo	Low income-2 Bedroom	154	135 (87.7%)	107	79.3%
3	Workers Estate,Laderin	Low income-1 Bedroom	265	246 (92.8%)	215	87.4%
4	Itarin,Ijebu Ode	Low income-2 Bedroom	39	33 (84.6%)	28	84.8%
5	Agbara	Low income-2 Bedroom	50	46 (92 %)	40	96.9%
6	Sagamu	Low income-2 Bedroom	56	48 (85.7%)	43	89.6%
7	Ota	Low income – 2 Bedroom	45	43 (95.6%)	38	88.4%
8	Mowe	Low income-2 Bedroom	30	25(83.3%)	22	88.0%
9	Ikenne	Low income-2 Bedroom	29	23 (79.3%)	21	91.3%
10	Igboewe, Ilaro	Low income 2 Bedroom	30	26 (86.7%)	18	69.2%
		Total	907	825 (91.0)	716	86.6%

Source: Author's Field Survey (2011)

The total number of the questionnaires distributed was 825 and 716 (86.6%) questionnaires were returned. Workers' estate, Laderin has the highest number of respondents of 246 constituting 29.8% of the total population of 825, while Ikenne and Ilaro have 23, 26 respondents respectively.

Table 5.4 Occupancy Rates of Estate Housing Units

Name of Estate	1-3 Occupants	4-6 Occupants	7- 9 Occupants	Total No of Occupants
Asero	54	123	7	184
Gateway Media, Ajebo	24	77	6	107
Workers Estate, Laderin	91	121	3	215
Itarin, Ijebu Ode	11	13	4	28
Agbara	5	31	4	40
Sagamu	10	28	5	43
Ota	17	15	6	38
Mowe	8	9	5	22
Ikenne	5	12	4	21
Igboewe, Ilaro	3	11	4	18
TOTAL	228	440	48	716

Source: Author's Field Survey (2011)

Table 5.4 shows that the modal class of the occupants per housing unit is 4-6 occupants (440), the next class is 1-3 occupants (228) while the least class is 7-9 Occupants (48) per housing Worker estate, Laderin has the least occupancy rate, Ijebu Ode, Ota, Sagamu Ikenne have the slightly high occupancy rate.

5.6.2 Sex of the Respondents (Public Housing Estates)

The survey shows the predominance of male household-heads, as shown in Table 5.4. There are 560 male respondents (78.2%) compared with 156 female respondents (21.8%).

Less than one in fifth of the respondents were female. That is, there were over four times male household-heads among respondents than there were female in the entire sample. This overall predominance of male household-heads, accords with the traditional notion, which regards men as heads of households

Table 5.5 Sex of Respondents by Estate (Public Housing Estates)

Name of Estate	Male		Female		Total
	No	%	No	%	No
Asero	155	84.2	29	15.8	184
Gateway Media, Ajebo	81	75.7	26	24.3	107
Workers Estate, Laderin	140	65.1	75	34.9	215
Itarin, Ijebu Ode	23	82.1	5	17.9	28
Agbara	35	87.5	5	22.5	40
Sagamu	36	86.4	7	13.6	43
Ota	35	92.1	3	7.9	38
Mowe	19	86.4	3	13.6	22
Ikenne	19	90.5	2	9.5	21
Igboewe, Ilaro	17	94.4	1	0.6	18
TOTAL	560	78.2	156	21.8	716

Source: Author's Field Survey (2011)

The data in Table 5.4 shows that there are more male occupants in virtually all the estates, though there is increase in the percentage of female occupants in Asero, Ajebo and Laderin , this could be attributed to the fact that Laderin estate is mostly occupied by civil servants and there is almost equal opportunity for the civil servants to own

apartment irrespective of his /her gender. In Asero and Ajebo estates some of the apartments have been let out to tenants and some of the tenants are occupying these apartments because of their proximity to their place of work. The largest proportion of female heads of households occurred in Laderin Estates (34.9%) and Ajebo (24.3%) while the largest proportion of male households occurred in Ilaro (94.4%).

5.6.3 Employment/ Resident`s Status of Respondents (Public housing Estates)

The largest number of the occupants in the estates is the Civil Servants (237), majority are Staff allottees (See Table5.6) who must have benefitted from the government housing scheme through staff housing loan scheme. The next class of people are the Public Servants (204), and the least is the students/unemployed (51).

The variation in the proportion of nature of employment among respondents can be a reflection of the age of the estates, as well as the relative location of the estates with respect to government establishments, private organisations, industrial firms, educational institutions or major commercial centres.

Table 5.6 Employment/ Resident`s Status (Public Housing Estates)

Employment	Resident`s Status			Total
	Outsiders	Tenancy	Staff Allottee	
Civil Servant	63	56	118	237
Public Servant	95	95	14	204
Self Employed	74	63	12	149
Students/Un-employed	17	34	-	51
Retiree	66	6	3	75
Total	315	254	147	716

Source: Author's Field Survey (2011)

5.6.4 Socio-Economic Status of the Respondents (Public Housing Estates)

Table 5.7 shows the socio-economic status of the respondents in the selected low-income housing estates. Workers Estate Laderin has the highest number of low -income earners occupying the estate this can be attributed to the fact that this estate was built purposely for the civil servants. The modal class of the respondent occupying the estate is low-income class, constituting 75.1% of the entire respondents; medium income is 23.9% while the high-income class constitutes only 1% of the total number of respondents. This trend appears to be in agreement with the public housing policy regarding the low-income housing scheme, which aims at providing housing for the less privileged. Though the policy tends to favour civil servants more than other employees from public and private sectors

Table 5.7 Socio- Economic Status of Respondents by Estate

Name of Estate	Low-Income (<N54,000) per month		Medium Income (N54,001-N105000) per month		High Income (N105,001-N285000) per month		Total
	No	%	No	%	No	%	
Asero	155	11.07	27	14.7	2	1.1	184
Gateway Media, Ajebo	62	57.9	44	41.1	1	0.9	107
Workers Estate,Laderin	164	76.23	51	23.7	-	-	215
Itarin,Ijebu Ode	23	82.1	4	14.3	1	3.6	28
Agbara	25	62.5	14	35	1	2.5	40
Sagamu	36	83.7	7	16.3	-	-	43
Ota	25	65.8	11	30	2	5.3	38
Mowe	16	72.7	6	27.3	-	-	22
Ikenne	17	81,0	4	19.0	-	-	21
Igboewe, Ilaro	15	83.3	3	16.7	-	-	18
TOTAL	538	75.1	171	23.9	7	1.0	716

Source: Author's Field Survey (2011)

5.6.5 Educational Attainment of the respondents (Public housing Estates)

Table 5.8 shows the distribution of the respondents according to their educational attainment across the ten selected housing estates.

Workers Estate has the highest number of educated people because most of the residents are government workers and the minimum requirement for working in government establishment is first school living certificate (WASC) and the least educated respondents were found in Igboewe Ilaro among the elderly in the estate.

Table 5.8 Educational Attainment of respondents by Estate

Name of Eatate	Primary		Secondary		Post Secondary		Post graduate		Total
	No	%	No	%	No	%	No	%	
Asero	1	0.5	29	15.8	100	54.3	54	29.4	184
Gateway Media, Ajebo	-	-	21	19.6	60	56.1	26	24.3	107
Workers Estate,Laderin	-	-	12	5.6	115	53.5	88	40.9	215
Itarin,Ijebu Ode	1	3.6	7	25.0	14	50.0	6	21.4	28
Agbara	-	-	5	12.5	19	47.5	16	40.0	40
Sagamu	1	2.3	12	27.9	21	48.9	9	20.9	43
Ota	-	-	8	21.1	18	47.4	12	31.5	38
Mowe		-	6	27.2	12	54.6	4	18.2	22
Ikenne	1	4.7	6	28.6	11	52.4	3	14.3	21
Igboewe, Ilaro	1	5.6	6	33.3	10	55.5	1	5.6	18
TOTAL	5	0.7	112	15.6	380	53.1	219	30.6	716

Source: Author's Field Survey (2011)

5.6.6 Age Ranges of Respondents (Public Housing Estates)

The survey shows that the modal age range of the respondents is 40-54years, constituting 52.7%. the next age bracket is 26-39 years constituting 40.6%, age brackets below25 and above 70 years are 1.7% ,0.1% respectively (see Table 5.9). The study also shows that in all the low-income estates, majority of the respondents were between 40-54 years, with the exception of the Igboewe, Ilaro estate where majority were below 39years.

Table 5.9 Age Ranges of Respondents by Estate

Name of Eatate	Below 25yrs		26-39yrs		40-54yrs		55-69yrs		>70yrs		Total
	No	%	No	%	No	%	No	%	No	%	
Asero	2	1.1	75	40.8	103	56	4	2.2	0	0	184
Gateway Media, Ajebo		-	47	43.9	51	47.7	9	8.4	0	0	107
Workers Estate,Laderin	4	1.9	101	47	110	51	0	0	0	0	215
Itarin,Ijebu Ode	2	7.1	9	32.1	13	46.4	4	14.3	0	0	28
Agbara	1	2.5	14	35.0	22	55.0	2	5.0	1	2.5	40
Sagamu	1	2.3	16	37.2	24	55.8	2	4.6	0	0	43
Ota	0	0	5	13.2	28	73.7	5	13.2	0	0	38
Mowe	0	0	9	40.9	10	45.5	3	13.6	0	0	22
Ikenne	1	4.7	7	33.3	9	42.9	4	19.0	0	0	21
Igboewe, Ilaro	1	5.6	8	44.4	7	38.9	2	11.1	0	0	18
TOTAL	12	1.7	291	40.6	377	52.7	35	4.9	1	0.1	716

Source: Author's Field Survey (2011)

The high percentage of the respondents being in the 40-54years could be attributed to the high population of the civil servants that are direct beneficiaries of the government housing policy, and most of them are owner occupiers in Workers estate, Laderin and also some are in Asero and Ajebo housing estates. The exception observed in Ilaro estate is due to the fact that original owners of the housing units rented out their apartments to tenants who are younger persons and mostly students.

5.6.7 Marital Status of Respondents

Table 5.10 shows that most predominant group among the respondents in the estates as the married persons.

Table 5.10 Marital Status/Sex Distribution

Marital Status	Gender		Total	Percentage %
	Male	Female		
Married	508	88	596	83.2
Divorced	14	21	35	4.9
Widowed	5	13	18	2.5
Single	53	14	67	9.4
Total	580	136	716	100

Source: Author's Field Survey (2011)

The proportion of the married respondents 596 (83.2%) is the highest and it exceeds the total number of other respondents' altogether. It shows that the married people are more interested in providing houses for their families as security for the future in case of eventuality.

5.6.8 Resident`s Status/Age Range Cross Distribution

Table 5.11 shows the Resident`s Statures/Age range Cross Distribution of the respondents in the ten selected housing estates. The modal class of the residents in the housing estates visited is the outsiders 316 (44.1%) out of 716, the next class is tenant 254 (35.4%) and the least class is the staff allotees 147 (20.5%).The age bracket of most of the residents in the estates is 40-54years while least common age is >70years.

Table 5.11 Resident`s Status/Age range Cross Distribution

Residents` Status	Below 25yrs		25-39yrs		40-54yrs		55-69yrs		>70yrs		Total	%
	No	%	No	%	No	%	No	%	No	%		
Outsiders	3	0.4	102	14.2	179	25.0	30	1.0	1	-	316	44.1
Staff Allottee	-	-	32	4.5	113	15.8	2	0.3	-	-	147	20.5
Tenant	9	1.3	157	21.9	85	11.9	3	0.4	-	-	254	35.4
Total	12	1.7	291	40.6	377	52.7	35	4.9	1	0.1	716	100

Source: Author's Field Survey (2011)

5.7 Evaluation of the Physical Characteristics of the Housing Estates

Table 5.11 summarizes the assessment of the physical characteristics of the estates. The scope of the assessment was limited to the exterior environments of the housing units. Ten performance criteria were developed and used in assessing the physical quality and condition of residential environments of the estates, namely:

1. External visual quality of buildings (ViQ): the evidence and general state of the external finishings, such as renderings and painting.
2. Maintenance quality of buildings (MtQ): the evidence and extent of renovations and improvement of buildings / apartments by the residents.
3. Structural quality of buildings (StQ): evidence of durability, stability, and long-term integrity in terms of structure,fabrics, and materials.
4. Detailing quality of buildings (DeQ): the detailing and performance of the operational elements, such as doors, windows, and fiscia boards.
5. Quality of building services (QBs): availability and quality of amenities and conveniences such as sanitary, water supply, refuse, and sewage disposal.

6. Quality of estate roads (QRd): whether they were tarred or not, condition of surface, kerbs, and drainage; and efficiency of vehicular circulation.
7. Quality of landscaping (QLs): evidence of natural and designed landscape and their condition.
8. Quality of semi-public open spaces (QOS): existence, condition, layout, and efficiency of open spaces between blocks of housing units for recreation and socialization; and indoor-outdoor spatial relationships.
9. Quality of environmental layout (QEn): an overall image of neatness orderliness, layout efficiency, pedestrian circulation, and street quality.
10. Quality of the location (QLc): describes how the estate relates with the surrounding neighbourhoods (Is it isolated, integrated, or dominated?)

These performance mandates were assessed and scored in terms of whether they were evidenced and in good state (3 points), evidenced and in fair state (2 points), evidenced and in poor state (1 point), not evidenced at all (0 point). The summation of the ten criteria gave the value of Total Physical Quality (TPQ) for each estate. Table 5.12 shows that Laderin Estate has the highest Total Physical Quality (TPQ) points of 26 out of 30 points maximum while Ilaro Estate has the least TPQ of 14pts. About halve 50% of the respondents believed that they have not felt the positive impact of the Corporation on their estates in the area of maintenance and management of the estates. This is evident in the poor state of the physical conditions of the housing estates. Painting on most of the walls of the old housing estates has peeled and the infrastructural facilities are dilapidated.

Table 5.12 Assessment of the Physical Characteristics of the Selected Estates

Estate	ViQ 1	Mt Q 2	StQ 3	DeQ 4	QBs 5	QRd 6	QLs 7	QOs 8	QEn 9	QLc 10	TPQ 11	Total	Ranking
Asero	3	2	3	3	2	2	2	1	3	3	24	30	3
Ajebo	3	2	3	3	2	2	2	2	3	3	25	30	2
Laderin	2	2	3	3	2	3	2	2	3	3	25	30	1
Ijebu Ode	2	2	3	2	1	2	1	2	3	3	21	30	4
Agbara	2	1	2	2	1	2	1	1	2	2	16	30	6
Sagamu	1	2	2	2	2	2	1	2	2	2	18	30	5
Ota	2	2	2	2	1	1	1	1	1	2	15	30	7
Mowe	2	1	2	2	1	1	1	2	1	2	15	30	7
Ikenne	1	2	2	2	2	1	3	2	2	2	19	30	5
Ilaro	1	1	2	2	1	1	1	2	2	1	14	30	8
Total	19	17	24	23	15	17	15	17	22	23	193	300	
Percentage %	63.3	56.7	80	76.7	50	56.7	50	56.7	73.3	76.7	64.3		

Source: Author's Field Survey (2011)

Key:

1. External visual quality of buildings (ViQ): 2. Maintenance quality of buildings (MtQ): 3. Structural quality of buildings (StQ): 4. Detailing quality of buildings (DeQ): 5. Quality of building services (QBs): 6. Quality of estate roads (QRd): 7. Quality of landscaping (QLs): 8. Quality of semi-public open spaces (QOs): 9. Quality of environmental layout (QEn): 10 Quality of the location (QLc): Total Physical Quality (TPQ)

5.7.1 Asero Housing Estate

It is one of the oldest State Government Low-income housing estates.The buildings are made of interlocking bricks. The visual quality and maintenance conditions of buildings on the estate are fair, though some areas have been overgrown with weed. The roads are not in very good conditions and there is no drainage for proper flow of water. 55% of the buildings are showing neglect and in adequate maintenance. Residents complained of lack of public water supply. Pedestrian walkways, greenery and landscaping are completely lacking in this estate.

5.7.2 The Gateway Media Village, Ajebo Road

The buildings on this estate have fairly good visual and maintenance qualities. 53% of the respondents were the initial owners while 28% and 19% of the respondents (according to survey data) were the transferred owners and tenants respectively. The transferred owners and tenants took up the housing units for reason of proximity to their places of work. Many of the young occupants expend much more on the maintenance and improvement of their housing than the original owners of the low-income houses who are less affluent. The physical environment is of tolerable quality based on the living standard of the occupants of the estate. This is a low/medium-income estate located in the heart of Abeokuta with a dynamic and challenging urban social setting.

5.7.3 OGD Workers Estate, Laderin

The blocks of houses are well arranged with well defined road network though there is provision for drainage systems. There is no specific recreation centre in the estate but at present, the estate has a Shopping Complex built in partnership with Gateway savings and Loans and Clinic and Maternity Centre built in partnership with Abeokuta South LG

5.7.4 OGD Estate Itanrin, Ijebu-Ode

The estate is located in the outskirt of Ijebu Ode Township. It is well laid out though without adequate car parks and pedestrian walkways. Itanrin estate is generally inactive and the street life dormant. There is no provision for children playgrounds, recreational and commercial activities. A major problem of the occupants of this estate is lack of pipe borne water though this has been taken care of by residents by digging wells. The estate is not properly fenced therefore security poses some problems to the residents of the estate.

5.7.5 The Agbara Housing Estate

The estate is situated along Agbara-Sokoto road in Ijebu-North East in Ogun State. The housing units are built in clusters without any defined territory. Most of the buildings in the estate are not well maintained. The network of roads within the estate are not tarred but graded. The estate is bounded in the North by Igere village and the villagers' poses security threat to residents of the estate because they are not as educated and affluent as the owner occupiers of the estate. To the extent that occupiers of the housing units close to the village have abandoned their houses due to incessant robbery attacks.

The estate has no public hospital and public school while the post office in the estate is not functional. It has a multi- purpose hall that shows evidence of neglect. Worthy of note is that the estate has no market where residents can buy food stuff or daily needs but they have to travel long distance to the neighbouring town Alaba for shopping.

5.7.6 The Sagamu Housing Estate

It is well laid out though without adequate car parks and pedestrian walkways. Sagamu estate is generally inactive and the street life dormant. There is no provision for children playgrounds, recreational and commercial activities. A major problem of the occupants of this estate is lack of pipe borne water though this has been taken care of by residents by digging wells. The estate is not properly fenced therefore security poses some problems to the residents of the estate.

5.7.7 OTA Shell Housing Estate

A total of 60 housing units were delivered to the owners at shell stage in 2005 but at the time of study only 45 units of 2-bedroom detached houses have been completed and occupied. The remaining buildings are at deferent levels of construction.

Many occupants admitted that at the time of purchase, their buildings were not rendered, and without doors, except for poorly finished door frames at the entrances. They had to complete the details of the buildings according to their own means and taste, including plastering, fixing of windows, doors, and internal painting.

The housing estates have tarred road leading into the estate while other access roads are graded but not tarred. There are no street lights only halogen lights from individual houses. No general security system is on ground to cater for the security needs of the occupants. Security is provided by individual house owners. The estate is a low-income estate located in a dynamic and challenging urban social setting.

5.7.8 Mowe Housing Units

It consists of 30 units of 2-bedroom semi-detached houses built in 2001 while only 25 units have been occupied as at the time of carrying out the study.

The roads are not tarred. There is no drainage for proper flow of water. Residents complained of lack of public water supply. Pedestrian walkways, greenery and landscaping are completely lacking in this estate. Security is provided by individual house owners. The estate is a low-income estate located in a dynamic and challenging urban social setting.

5.7.9 Ikenne Housing Estate

The housing estate has 29 units of 2-bedroom detached houses already completed and occupied at the time of this study. There is no provision for children playgrounds, recreational and commercial activities. A major problem of the occupants of this estate is lack of pipe borne water though this has been taken care of by residents by digging wells. The estate is not properly fenced therefore security poses some problems to the residents of the estate.

5.7.10 Ilaro Housing Estate

It has 30 housing units and there are visible evidences of future development of some other units. The housing units do not have adequate infrastructural facilities like pipe borne water, constant electricity supply, good roads and drainage. Pedestrian walkways, greenery and landscaping are completely lacking in this estate.

5.8 Factors Influencing Levels of Residents' Expectations and Satisfaction with the Housing Estates

The study examined the elements and types of facilities which influence the residential satisfaction level of the inhabitants. It considered the variables that determine which facilities are more important to the occupants than the others.

The study (See Table 5.13 and 5.14) considered the ''residential satisfaction bundle of variables'' under two main sheltered components namely dwelling unit features with 11 variables and dwelling unit support services with 8 variables; and three non-sheltered components such as public facilities with 9 variables; social environment with 5 variables; and neighbourhood facilities with 12 variables. The level of housing satisfaction has been measure using a five-point Likert scale – ''1'' for very dissatisfied, ''2'' for dissatisfied, ''3'' for slightly satisfied, ''4'' for satisfied and ''5'' for very satisfied.

5.9 Ranking of Residential Satisfaction Variables

Table 5.13 shows the ranking of the residential variables. Living area (78.84) is the highest ranked as the most satisfactory and Public phone (29.24) is the least ranked among the variable by the residents of the housing estates sampled. Most residents agreed that their housing units are well ventilated and equally agreed that their housing units lack adequate public facilities.

Table 5.13 Ranking of Residential Satisfaction Variables

HABBITAT TABLE	VS	SA	NU	DIS	V-DIS	HAB IND	RANK
Living area	4.9	85.7	8.7	0.1	0.6	78.84	1
Ventilation	36.6	22.4	38.2	1.6	1.2	78.32	2
Dinning space	2.3	81.4	10.8	5.2	0.3	76.04	3
Kitchen space	0.7	79.5	11.5	7.8	0.5	74.42	4
Bedroom1	4.5	69.7	14.8	10.6	0.4	73.46	5
Corridor	0.3	69.5	20.5	9.4	0.3	72.02	6
Dist to nearest town	25.8	27.3	20.2	15.1	21.6	70.12	7
Bedroom-2	3.5	52.5	33.8	10	0.2	69.82	8
Noise level	28.2	22.9	11.7	20.1	17.1	65	9
Dist to Work place	12.8	34.7	21.7	14.3	16.5	62.6	10
Toilet	0.7	26.6	58.7	9.9	4.1	61.98	11
Dry area	0.1	10.1	89.3	0.4	0.1	61.94	12
Bathroom	0.2	32.8	36.6	29.5	0.9	60.38	13
Distance to Bus Station	10.9	22.5	35.2	19.3	12.1	60.16	14
Local shops	10.1	14.8	49.6	13.2	12.3	59.44	15
Accident situation	12.2	25.3	28.6	11.6	22.3	58.7	16
Multi-purpose hall	4.2	32.8	24.9	18.8	19.3	56.76	17
Car/motor cycle parking	7.1	29.3	21.7	21.4	20.5	56.22	18
Dist to Police Station	3.6	18.4	44.9	19.5	13.6	55.78	19
Dist to Religious Buildg	9.3	18.5	29.9	21.4	20.9	54.78	20
Community Relations	5.7	15.7	38.9	17.4	22.3	53.02	21
Os/Play area	7.3	9.2	35.5	27.9	20.1	51.14	22
Distance to school	4.8	12.8	34.6	23.5	24.3	50.06	23
Perimeter road	2.3	21.6	22.5	30.3	23.3	49.86	26
Security control	0.3	14.6	37.3	26.3	21.5	49.18	24
Prayer hall	4.7	11.2	29.9	30.1	24.1	48.46	25
Dist to Shopping Center	1.1	12.2	36.3	25.9	24.5	47.9	26
Crime situation	4.5	9.6	24.8	35.2	25.9	46.32	27
cleaness of drains	0	1.3	51.1	14.4	33.2	44.1	28
Distance to Market	2.3	13.5	11.5	44.7	28	43.48	29
street lighting	2.1	1.9	42.6	14.8	38.6	42.82	30
garbage collect	0	1.8	39.2	24.5	34.5	41.66	31

food stalls	0.1	0.1	33.6	34.5	31.7	40.48	32
Distance to Hospital	3.8	0.4	16.1	40.2	39.5	37.76	33
Dist to Public Library	0	0	30.8	24.6	44.6	37.24	34
Socket	0.1	5.1	19.8	30.1	44.9	37.08	35
Distance to fire Station	0	2.6	22.6	31.6	43.2	36.92	36
Pedestrian walk way	0	1.8	11.4	42.6	44.2	34.16	37
Distance to recreational centre	0	0	12.5	44.3	43.2	33.86	38
cleaness of garbage house	0	0.3	11.9	42.3	45.5	33.4	39
Public Phones	0	0	0	46.2	53.8	29.24	40
dwelling units features (11)							
dwelling units support (04)		MEAN=53.53		SUM=2194.92			
Public facilities (09)							
Social Environment (05)							

Source: Author's Field Survey (2011)

Key:

VS-Very Satisfied,

SA-Satisfactory,

NU-Nuetral,

DIS-Dissatisfied,

V-DIS-Very Dissatisfied,

HAB IND- Habbitat Index

5.10 Residential Satisfaction Variables Categorised

Table 5.14 shows the residential satisfaction variables as categorized into sheltered components. The most satisfactory features are dwelling units' features (11) with mean of 67.66 while the least satisfactory is dwelling unit support (04) with mean of 40.5. The implication of this finding is that the residents are more satisfied with their dwelling units' features and they are least satisfied with their dwelling units support.

Table 5.14 Residential Satisfaction Variables Categorised

HABBITAT TABLE	VS	SA	NU	DIS	V-DIS	HAB IND	RANK	SN
Living area	4.9	85.7	8.7	0.1	0.6	78.84	1	1
Dinning space	2.3	81.4	10.8	5.2	0.3	76.04	3	2
Kitchen space	0.7	79.5	11.5	7.8	0.5	74.42	4	3
Bedroom1	4.5	69.7	14.8	10.6	0.4	73.46	5	4
Bedroom-2	3.5	52.5	33.8	10	0.2	69.82	7	5
Toilet	0.7	26.6	58.7	9.9	4.1	61.98	11	7
Bathroom	0.2	32.8	36.6	29.5	0.9	60.38	12	8
Dry area	0.1	10.1	89.3	0.4	0.1	61.94	10	9
Corridor	0.3	69.5	20.5	9.4	0.3	72.02	6	10
Socket	0.1	5.1	19.8	30.1	44.9	37.08	35	11
Ventilation	36.6	22.4	38.2	1.6	1.2	78.32	2	12
dwelilng units features (11)	MEAN=67.66		SUM=744.3					
	VS	SA	NU	DIS	V-DIS	HAB IND	RANK	SN
cleanness of drains	0	1.3	51.1	14.4	33.2	44.1	29	13
street lighting	2.1	1.9	42.6	14.8	38.6	42.82	30	14
garbage collection	0	1.8	39.2	24.5	34.5	41.66	32	15
cleanness of garbage house	0	0.3	11.9	42.3	45.5	33.4	39	16
dwelling units support (04)	MEAN=40.50		SUM=161.98					
	VS	SA	NU	DIS	V-DIS	HAB IND	RANK	SN
Os/Play area	7.3	9.2	35.5	27.9	20.1	51.14	22	17
Car/motor cycle parking	7.1	29.3	21.7	21.4	20.5	56.22	18	18
Prayer hall	4.7	11.2	29.9	30.1	24.1	48.46	25	19
Multi-purpose hall	4.2	32.8	24.9	18.8	19.3	56.76	17	20
Perimeter road	2.3	21.6	22.5	30.3	23.3	49.86	26	21
Pedestrian walk way	0	1.8	11.4	42.6	44.2	34.16	40	22
Public Phones	0	0	0	46.2	53.8	29.24	41	23
Local shops	10.1	14.8	49.6	13.2	12.3	59.44	14	24
food stalls	0.1	0.1	33.6	34.5	31.7	40.48	33	25
Public facilities (09)	MEAN=47.31		SUM=425.76					
	VS	SA	NU	DIS	V-DIS	HAB IND	RANK	SN
Noise level	28.2	22.9	11.7	20.1	17.1	65	8	26

Accident situation	12.2	25.3	28.6	11.6	22.3	58.7	15	27
Crime situation	4.5	9.6	24.8	35.2	25.9	46.32	28	28
Security control	0.3	14.6	37.3	26.3	21.5	49.18	24	29
Community Relations	5.7	15.7	38.9	17.4	22.3	53.02	20	30
Social Environment (05)	MEAN=54.44		SUM=272.22					
	VS	SA	NU	DIS	V-DIS	HAB IND	RANK	SN
Distance to nearest town	25.8	27.3	20.2	15.1	21.6	70.12	16	31
Distance to Work place	12.8	34.7	21.7	14.3	16.5	62.6	9	32
Distance to school	4.8	12.8	34.6	23.5	24.3	50.06	23	33
Distance to Police Station	3.6	18.4	44.9	19.5	13.6	55.78	19	34
Distance to Hospital	3.8	0.4	16.1	40.2	39.5	37.76	34	35
Distance to Shopping Center	1.1	12.2	36.3	25.9	24.5	47.9	27	36
Distance to Market	2.3	13.5	11.5	44.7	28	43.48	31	37
Distance to Public Library	0	0	30.8	24.6	44.6	37.24	36	38
Distance to Religious Building	9.3	18.5	29.9	21.4	20.9	54.78	21	39
Distance to recreational centre	0	0	12.5	44.3	43.2	33.86	38	40
Distance to Bus Station	10.9	22.5	35.2	19.3	12.1	60.16	13	41
Distance to fire Station	0	2.6	22.6	31.6	43.2	36.92	37	42
Neighbourhood facilities(12)	MEAN=49.22		SUM=590.66					

Source: Author's Field Survey (2011)

5.11 Comparative Analysis of Occupants' Expectations with Housing Experience

The descriptive analysis of the assessment of the respondents to the cost value of their housing was used to determine whether the houses were worth the purchase price. It ended with comparative assessment of their present housing with the former housing.

5.11.1 Personal Assessment of Housing Value

Respondents were asked if they were of the opinion that their houses are worth the cost of purchase. Table.5.15 summarises the respondents' assessment of the personal value of their housing, showing that above half of the respondents 57% valued their property positively. These are mostly government allottees occupying the workers estates, while Not Applicable accounted for 20% that is those who are mostly tenants of the houses.

Table 5.15 Respondent Cost Assessment of Housing Units

	Positive value	Negative value	Neutral	Not Applicable	Total
Frequency	409	107	57	143	716
Percentage	57.1%	14.9%	8.0%	20%	100%

Source: Author's Field Survey (2011)

Most of the respondents considered their houses fair enough not minding their quality at the time of purchase when compared to the same resource in housing market and in addition to the prospect of being a landlord in face of acute housing challenges.

Moreover, some respondents have adapted to their housing conditions, while most have renovated the houses to suit their taste.

5.11.2 Comparative Assessment with Former Housing

Respondents were asked to indicate whether the expectations they had when they heard about the housing scheme had been met when they moved into their apartments. They were also asked to state the reasons for preferring their new housing to former housing based on 5-likert point. The respondents were asked to indicate the level of satisfaction or dissatisfaction using some selected quality performance criteria on a 1 - 5 Likert-type scale. The level of housing satisfaction was measured by using a five-point Likert scale – ''1'' for very satisfied. ''2'' for satisfied, ''3'' for slightly satisfied, ''4'' for dissatisfied and ''5'' for very dissatisfied. The mean scores for each of the measures were computed using (Adenuga, 2003). As shown in Equation (4)

$$\text{Mean Item Score (MIS)} = \frac{\sum (F*s)}{N} \qquad \text{——————(4)}$$

Where,

S = score given to each factor

f = frequency of responses to each rating

N = total number of response concerning the factors.

5.11.3 Expectations of Respondents Not Met By Present Accommodation

Table 5.16 shows the expectation of the respondents that were not met while Table 5.17 shows the reasons why they prefer their present accommodation to the former.

Table 5.16 Expectations of Respondents Not Met

S/N	Expectations not met	Mean In Score	Rank
1.	Provision of Market	4.62	1
2.	Provision of Hospital	4.35	2
3.	Provision of Security Control	4.35	3
4.	Provision of Recreational Centres	4.15	4
5.	Provision of Shops	3.90	5

Source: Author's Field Survey (2011)

Table 5.16 shows Provision of Market (4.62) as the highest expectation ranked not met while Provision of Shops (3.90) is the least expectation not met. The implication of this finding is that the residents expected adequate provision should be made for them where they can buy and sell food items and other related household items. Table 5.17 shows that the residents viewed improved status (4.45) as the most important reason why they prefer their present accommodation to their former accommodation.

Table 5.17 Reasons for Preferring Present Accommodation to Former

S/N	Reason	Mean Item Score	Rank
1.	Improved status	4.45	1
2.	Pride of ownership	4.40	2
3.	More comfortable apartment	4.05	3
4.	Peaceful environment	3.90	4
5.	Better living environment	3.80	5

Source: Author's Field Survey (2011)

Majority of the respondents (87.0%) saw their houses as comparing favourably better than the houses they lived in before. The main reason for this was that respondents had moved out of shacks to a better living environment. (Table 5.18). This is in agreement with the earlier explanations. It is also in agreement with the assertion of Ogunshakin (1992), that the problem of infrastructure in public housing should be seen in the light of a general crisis. It means that though the mass housing estates infrastructures are inadequate, they are better than the situations in many of the urban housing estates. However, most of the respondents complained of lack of adequate spaces for kitchen, storage, laundry, guest room, visitors` toilets and shops,

Table 5.18 Respondents Comparative Assessment of Housing Units

	Better	Worse	Neutral	Not Applicable	Total
Frequency	623	35	47	11	716
Percentage	87.0%	4.9%	6.6%	1.5%	100%

Source: Author's Field Survey (2011)

5.12: Comparing Levels of Satisfaction with Socio-economic Characteristics of Respondents

This section presents the analysis, interpretation and discussion of the quantitative data collected on the basis of the test of hypothesis1 of the study, namely:

Null hypothesis 1

There is no significant relationship between socio-economic characteristics of the residents of public housing and their residential satisfaction levels.

It also compares the existing findings of previous related researches with the outcome of the test of hypothesis 1 of the study.

5.12.1 Analysis of Hypothesis 1

Ho: There is no significant relationship between each of the selected socio-economic characteristics of the residents (socioeconomic status, age ranges, educational attainment, ownership status, marital status, household size) and their residential satisfaction level.

Hi: There is significant relationship between each of the selected socio-economic characteristics of the residents (socio-economic status, age ranges, educational attainment, ownership status, marital status, household size) and their residential satisfaction level.

The results summarized in the Table 5.19 shows a positive and significant correlation between age range (r=0.397), marital status (r=0.297), and household size (r=0.189), however, Socio economic status (r=-0.275), educational attainment (r=-0.213) and ownership status (r= -0.285) had negative, but significant correlations. The coefficient of determination (r^2) represents the percentage variation in residential satisfaction brought about by each of the independent variable considered. Therefore, the percentage contribution attributed by each variable is as follows: age range (15.8%), marital status (8.8%), and household size (3.6%), Socio economic status (7.6%), educational attainment (4.5%) and ownership status (8.1%). The Null hypothesis (Ho) is rejected.

Table 5.19 Residential Satisfaction with Socio-Economic Characteristics of the Residents.

.Compositional characteristics (X)	Correlation coefficient (r)	Coefficient of determination (r^2)	Significance level	Decision
Socio economic status	-0.275*	0.076	0.000	Null hypothesis rejected
age ranges	0.397*	0.158	0.000	Null hypothesis rejected
educational attainment,	-0.213*	0.045	0.000	Null hypothesis rejected
ownership status	-0.285*	0.081	0.000	Null hypothesis rejected
Marital Status	0.297*	0.088	0.000	Null hypothesis rejected
household size	0.189*	0.036	0.000	Null hypothesis rejected

*0.05 level of significance Source: Author's Field Survey (2011)

The implication is that the Mean Residential Satisfaction (RESAT) decreases as the socio-economic status of the residents increase. The mean residential satisfaction (RESAT) increases as the age groups of residents increase. Also, Mean Residential Satisfaction (RESAT) decreases as the educational attainment of the residents increase. The Mean Residential Satisfaction (RESAT) increases as the ownership of the residents increase. The Mean Residential Satisfaction (RESAT) decreases as the marital status of the residents increase. The results are in line with the theories stipulated by Amerigo (2002) and Kellecki and Berkoz (2006). Amerigo (2002) states residents` perception of space may vary with socio-economic characteristics of the residents (socio-economic status, age ranges, educational attainment, ownership status, marital status, household

size). Kellecki and Berkoz (2006) also confirmed this theory that levels of satisfaction of the residents vary with their demographic and socio-economic differences. These theories constituted the basis for the hypothesis and the study on investigation on the relationships between the independent variables with dependent variables using correlation analysis.

5.13 Comparing Levels of Satisfaction with Length of Residency in the Housing Estates

This section presents the analysis, interpretation and discussion of the quantitative data collected on the basis of the test of hypothesis2 of the study, namely:

Null hypothesis 2

There is no significant relationship between the length of residency in the housing estate and the levels of satisfaction of the residents of the state public housing estates.

It also compares the existing findings of previous related researches with the outcome of the test of hypothesis 2 of the study.

5.13.1 Analysis of hypothesis 2

Ho: There is no significant relationship between the length of residency in the housing estate and the levels of satisfaction of the residents of the state public housing estates.

Hi: There is significant relationship between the length of residency in the housing estate and the levels of satisfaction of the residents of the state public housing estates.

The breakdown of the length of residency of the respondents in the ten selected housing estates is shown in Table 5.20.

Table 5.20 Length of Residency of Respondents

Name of Estate	Length of Residency						Total
	Up to3years		4-6yrs		7yrs and above		
	No	%	No	%	No	%	
Asero	11	6.0	147	79.9	26	14.1	184
Gateway Media, Ajebo	18	16.8	89	83.2	0	0.0	107
Workers Estate,Laderin	52	24.2	163	75.8	0	0.0	215
Itarin,Ijebu Ode	4	14.3	24	85.7	0	0.0	28
Agbara	7	17.5	18	45.0	15	37.5	40
Sagamu	5	11.62	38	88.38	0	0.0	43
Ota	4	10.5	34	89.5	0	0.0	38
Mowe	1	4.5	21	95.5	0	0.0	22
Ikenne	8	38.1	13	61.9	0	0.0	21
Igboewe, Ilaro	10	55.6	8	44.4	0	0.0	18
Total	120	16.8	555	77.5	41	5.7	716

Source: Author's Field Survey (2011)

Table 5.20 shows the length of residency of the respondents. 555 residents (77.5%) have lived in the estates for at least 4 years and only 120 residents (16.8%) have lived for less than 3years. This shows that they have stayed reasonably long enough in the estate to have good understanding of the prevailing challenges in the estate.

The data collected on the number of years that the respondents have lived in the selected estates are analysed using linear correlation analysis. (See Table 5.21)

Table 5.21 Correlation Analysis of Residential Satisfaction with Length of Residency of the Residents

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Compositional characteristics (X)	Correlation coefficient (r)	Coefficient of determination (r^2)	Significance level	Decision
Length of residency	0.375*	0.141	0.000	Null hypothesis rejected

*0.05 level of significance

Source: Author's Field Survey (2011)

The relationships of these independent variables with the dependent variable were investigated using correlation analysis. The results summarized in the Table 5.21 shows a positive and significant correlation between length of residency (r-0.375), and level of satisfaction of the residents. The coefficient of determination (r^2) represents the percentage variation in residential satisfaction brought about by the independent variable considered. The percentage contributions attributed to length of residency is 14.1 percent. The results are in line with the theory postulated by Bonaiuto and Bonnes (2002).

5.14 Comparing Levels of Satisfaction with the Physical Conditions of the Housing Estates

This section presents the analysis, interpretation and discussion of the quantitative data collected on the basis of the test of hypothesis3 of the study, namely:

Null hypothesis 3

There is no significant relationship between the physical conditions of the housing estates and the levels of satisfaction of residents

It also compares the existing findings of previous related researches with the outcome of the test of hypothesis 3 of the study.

5.14.1 Analysis of hypothesis 3

Ho: There is no significant relationship between the physical conditions of the housing estates and the levels of satisfaction.

Hi: There is significant relationship between the physical conditions of the housing estates and the levels of satisfaction

The Chi-Square statistics presented in Table 5.22 shows that the Pearson Chi-Square is significant for satisfaction with estate. (SATEST), satisfaction with physical environment (SATPHY) , satisfaction with apartment (SATAPART). Therefore the null hypothesis is rejected for SATPHY; SATEST; and SATAPART. The alternative hypothesis is accepted.

Table 5.22 Summary of Chi-Square and Symmetric Measure Tests

	Chi-Square Test			Symmetric Measure	
Dimensions of satisfaction	Pearson Chi-Square	Df	Asymp. Sig. (2-sided)	Contingency coefficient	Approx.Sig
With Estate (SATEST)	15.980	2	0.000	0.144	0.000
With Apartment (SATAPART)	36.523	2	0.000	0.214	0.000
With physical Environment (SATPHY)	19.972	2	0.000	0.160	0.000

Source: Author's Field Survey (2011)

The contingency coefficient column in above Table 5.22 represents the measure of association, that is, the percentages of dimensions of residential satisfaction (dependent variables) with residential environment variables by the estate type (independent variable). The values are significant (P=0.000) for the three dimensions, namely:

14.4 percent of "satisfaction with the estate"

21.4 percent of "satisfaction with the apartment"

16.0 percent of "satisfaction with the physical environment"

Through the test of hypothesis 3, the study revealed that there is a relationship between the physical conditions of the estate and the levels of satisfaction of the occupants. It is also in agreement with Bonaiuto and Bonnes (2002), statement that residential satisfaction may vary with the residential experience of individual resident, such

characteristics as physical condition of the housing units and length of residency in the neighbourhood.

5.15 Summary of the Chapter

The Chapter presented the evaluation of the institutional framework of OPIC, the characteristics of the respondents in the housing estates, and the physical characteristics of the housing estates. It highlighted the ranking of the residential satisfaction variables that determine the satisfaction levels of the respondents in the housing units. Finally, it provided analyses on the hypotheses 1, 2 and 3 by comparing the levels of residential satisfaction with socio-economic characteristics and length of residency of respondents and the physical conditions of the housing estates.

CHAPTER SIX

SUMMARY OF FINDINGS AND IMPLICATIONS, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This Chapter attempts to summarise the study, aggregates the findings and also draws conclusions from the findings. It includes how the study has answered research questions and tested the hypotheses. Recommendations are made, based on the conclusions and suggestions are also made on further research.

6.2 Summary of the Study

This study set out to evaluate the building performance of state subsidized housing estates in Ogun State. The Chapter One of the thesis outlined the background of the study, stating the main research problems, which was to find out and assess how certain characteristics contribute to the satisfaction of the owners of the housing units. The objectives of the study were to: examine the institutional framework of Ogun State Property and Investment Corporation (OPIC) in relation to housing delivery process; evaluate the physical characteristics and conditions of the housing units; examine the socio-economic characteristics of the residents in the selected public housing estate; ascertain factors which influence levels of residents' expectations and satisfaction with the housing estates, and compare the occupants` expectations of the housing units, with

their housing experience in the estate. To further help in the evaluation of the building performance of the State housing estate the following hypotheses were proposed: **Null hypothesis 1**: There is no significant relationship between socio-economic characteristics of the residents of public housing and their residential satisfaction levels. **Null hypothesis 2:** There is no significant relationship between the length of residency in the housing estate and the levels of satisfaction of the residents of the state public housing estates. **Null hypothesis 3:** There is no significant relationship between the physical conditions of the housing estates and the levels of satisfaction of the residents of the estate. The justification of the study was stated, its delimitations were explained and a few operational terms were defined.

Chapter Two focused on the review of related literature on housing with emphasis on residential satisfaction of occupants of some existing housing estates and also provided information on housing policy in Ogun State. The conceptual framework of the study was highlighted in Chapter Three which made explicit the theoretical orientations and the assumptions that underlie the research approach. The methodology for the study was outlined in Chapter Four. This included the research design, the sampling procedure, the data collection instrument, including tests for its validity and reliability, and the techniques of data analysis. This was followed by Chapter Five on data analysis, findings, interpretations and discussions, based on the objectives, research questions and hypotheses of the study. Chapter Six summarized the study, examined the implications of the findings and made recommendations based on the findings.

6.3 Synopsis of the Main Findings

The study was on public housing projects built for the low- income earners in Ogun State between 2000 and 2010 with the aim of providing affordable housing units for the citizen that is adequate in terms of quality and quantity. The institutional framework of Ogun State Property Development and Investment Corporation was examined with emphasis on its organizational capacity as public housing agency and residential satisfaction of occupants of these housing units were also examined. The findings of the study are discussed below:

6.3.1 Ogun State Property and Development Corporation (OPIC)

The management and manpower structure of the OPIC, is fashioned after the style of private corporate world, though, approximately fifty seven percent (57.1%) of the respondents in the housing estates sampled viewed the cost of purchase of houses as reasonable and affordable.

In addition, Sixty percent (60%) of the respondents of the housing units provided by the agency believed that the housing delivery of the agency is adequate. While approximately fifty percent of the respondents believed that they had not felt the positive impact of the Corporation on their estates in the area of maintenance and management of the estates. The implication of this is that there is room for improvement in the implementation of policy.

6.3.2 Residents Status and Level of Satisfaction

The study showed that there are more male occupants in virtually all the estates, though there is increase in the percentage of female occupants in Asero, Ajebo and Laderin , this could be attributed to the fact that Laderin estate is mostly occupied by civil servants and there is almost equal opportunity for the civil servants to own apartment irrespective of his /her gender. In Asero and Ajebo estates some of the apartments have been let out to tenants and some of the tenants are occupying these apartments because of their proximity to their place of work. The largest proportion of female heads of households occurred in Laderin Estates (34.9%) and Ajebo (24.3%) while the largest proportion of male households occurred in Ilaro (94.4%). The modal age range of the respondents is 40-54years, constituting 52.7%. The next age bracket is 26-39 years constituting 40.6%, age brackets below25 and above 70 years is 1.7%, 0.1% respectively.

The study also showed that in all the low-income estates, majority of the respondents were between 40-54 years. Most respondents (49.3%) were `Public servants and Self–employed`, and this proportion cut across the low-income estates except for Workers Estate that has higher percentage of civil servants. Most of the respondents were the direct purchasers of the housing units and they valued their houses favourably, even in cases of evident low quality. Approximately, Fifty Seven percent (57%) of the residents valued their houses positively, as being worth the cost of purchase; while fifty seven (57%) considered their houses as comparing favourably better than the houses they lived in before. Moreover, most residents of the estate perceived their housing in terms of privacy, sense of community, and levels of safety and security.

The study also showed that more than sixty five percent (65%) of the respondents in the housing estates were not satisfied with the neighbour and social facilities in the estates. They ranked dwelling units most satisfactory, while neighbourhood facilities were ranked the least.

The test of the second hypothesis revealed that the age range, duration of residency, household size, socio-economic status, educational attainment, and ownership status of the residents were significant in their correlation with level of residential satisfaction. . This finding is in agreement with previous hypothesis stipulated by Galster and Hesser (1981), that objective compositional characteristics of individual have significant correlation with residential satisfaction. It also supports previous studies by Kaitilla, 1993; Lu, 1999; Ilesanmi 2005; Kellecki and Berkoz, 2006; Salleh, 2008; Fatoye, 2009 and Mohit et al, 2010 suggesting that tenure status, socio-economic characteristics of residents and housing characteristics were predictors of residential satisfaction . The result showed that those people who are younger, more recent residents, those with larger household sizes, those with higher educational attainment, and those with less permanent tenure such as tenants are more likely to show evidence of less residential satisfaction with their housing units.

6.3.3 Physical Characteristics of the Estates and Level of Residential Satisfaction

Majority of the housing estates lacked basic healthcare facilities, reliable portable water supply, good drainage system, functional street lighting, recreational and educational facilities, and refuse disposal system. They do not have landscaped open spaces, neighbourhood facilities, social infrastructures such as hospital, public economic

facilities such as shopping centres, and socio-economic facilities such as police stations. In addition, there is low level of security and no public facilities available within these estates and most of the housing units sampled were found to be inadequate in terms of number and sizes of bedrooms, conveniences and spaces for shops. Painting on most of the walls of the old housing estates has peeled and the infrastructural facilities are dilapidated. The agencies concerned should consider the location of estates and improve on the provision of basic infrastructural facilities for the betterment of the occupants of these estates.

6.4 Implications of Finding

The study showed that there is need for more government participation in the provision of housing, which is evident from both the literature review and the empirical data. It was discovered that most residents in the estates have large families of more than five persons. The policy implication of this observation is that future design should be responsive to the five dwelling features earlier mentioned in the study. Public housing agencies should provide larger housing units to cater for needs of residents with the large families. Also, proximity of the public housing estates to market, police station, hospital and educational facilities is of paramount importance.

The study also found out that lack of basic infrastructure such as pipe-borne water, good roads, hospitals, schools, police stations, shopping centres and recreational facilities was one of factors causing dissatisfaction amongst residents of the estates visited. The policy of this finding is that future public schemes should take care of these basic needs by

improving on the existing housing designs.

The study also revealed that less than 50% of the occupants of the low-income housing schemes were the direct purchasers of the housing units. This means that the public housing units' end up being sold to the higher income people and it negates and defeats the whole essence of public housing for low-income earners that are meant to be subsidized.

6.5 Conclusion

The study indentified the successes and failures in the performances of the Public Housing Estates in Ogun State by placing emphasis on occupiers' satisfaction with reference to interaction between designed physical structures, building environment and social facilities. In general, the residents of Ogun State public low-cost housing are moderately satisfied with their residential environment. However, the percentage of residents moderately satisfied is high with dwelling unit features than with neighbourhood facilities followed by support services, and public facilities, and social environment, which have higher percentage of respondents with low level of satisfaction. Correlation between cross-component satisfaction indices is low, whereas residential satisfaction index has high positive correlations with dwelling unit features, social environment, support services and public facilities, but it has low positive correlation with neighbourhood facilities. Socio-economic variables such as age, family size, and previous residence are negatively correlated with residential satisfaction, whereas employment type and length of residency are positively correlated with

residential satisfaction. It showed that the age range, duration of residency, household size, socio-economic status, educational attainment, and ownership status of the residents were significant in their correlation with level of residential satisfaction. In addition, it showed that by applying the Building Performance Evaluation framework to large-scale residential housing construction would not only improve the cost and quality of such housing, but it would also ensure that the environments occupied by these users meet criteria of environmental quality, cost-effective construction practices, and other social needs. It is a way of ensuring quality control and protecting the ultimate user or occupant from unsafe or unsanitary conditions, both at the moment of occupancy and over the lifetime of the building

6.6 Recommendations

Public housing estates are supposed to be built with the aim of providing decent accommodation of adequate quality and quantity for the less privileged citizens. However, inadequate funds and unfavourable economic situation in the country may hinder the government from meeting the high demand for housing caused by short fall in housing supply. It is advisable that government should encourage private partnership by providing enabling environment through tax reduction, well organised mortgage schemes and low interest rate for funding housing projects.

In addition, the opinions and inputs of end users of the housing schemes should be taken during the planning, design and construction stages of the project in order to meet the beneficiaries of the schemes.

Finally, government should apply Building Performance Evaluation in all its housing projects in order to ensure improved quality of housing and environment occupied by the users that will meet minimum criteria of environmental quality, cost effective construction practices and other social needs.

6.7 Areas for Further Study

This study focused on building performance evaluation of public housing estates in Ogun State from the perspective of residential satisfaction of the occupants with regard to the housing units, the environment and socio- economic status of the home owners:

Future studies could be focused on building performance evaluation of public housing in other states of the federation for comparison.

Studies could also focus on comparison between the levels of satisfaction among occupants of public housing and private housing.

Also, different government agencies responsible for public housing delivery could be compared to know which of them is performing to expectation in term of housing delivery to the satisfaction of the public.

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APPENDICES

APPENDIX1A

DEPARTMENT OF BUILDING TECHNOLOGY

COLLEGE OF SCIENCE AND TECHNOLOGY

COVENANT UNIVERSITY

OTA, OGUN STATE

QUESTIONNAIRE -A

THESIS TITLE: PERFORMANCE EVALUATION OF STATE SUBSIDISED HOUSING SCHEME: A CASE STUDY OF OGUN STATE HOUSING PROJECTS

Dear Respondent,

This questionnaire is designed solely to carry out investigation on the above topic for a Ph.D Research in Construction Management. Your prompt cooperation in responding to the questions appropriately shall be highly appreciated.

All information provided will be treated with strict confidentiality.

Thank you.

Yours faithfully,

A.O.Ogunde

December, 2010

APPENDIX1B

QUESTIONNAIRE ON PERFORMANCE EVALUATION OF STATE SUBSIDISED HOUSING SCHEME:A CASE STUDY OF OGUN STATE HOUSING PROJECTS

Section A: Personal Information

1. Name of Housing Estate:--------Block:-------No:-------House Type:---------

2. Male/Female:----------
3. Age range:
   Below25 [ ] 25-39[ ] 40-54[ ] 55-69[ ] 70yrs and above[ ]
4. Educational Background:
   Primary [ ]; Secondary [ ]; Post secondary [ ]; Postgraduate [ ]

5. Marital status: Married [ ] Separated [ ] Divorced [ ] Widowed [ ] Single [ ]
6. Occupation----------
7. Nature of employment: Government [ ] Self employed [ ]; Wage earner [ ]; retiree [ ]
8. Socio -economic status: Low income [ ] lower medium income [ ]; Upper medium income [ ]; High income [ ].
9. State of Origin: ----------

Housing units Information

1. Length of residency in the apartment: ----------.

2. Number of people living in this house? ----------

3. Do you own the apartment? Yes/ No If Yes, how did you own it? Direct purchase from----------; Transferred ownership [ ] other arrangements please explain----------.

4. How did you obtain information about the housing scheme?

   Public media [ ]; through friends /relatives [ ] through staff of the agency [ ].
5. Did you experience much difficulty in the payment of the required fees for the purchase of the house? Yes [ ]; No [ ]; I don`t know [ ].

6. Source(s) of funds for the purchase of the house: Financial assistance from friends, relatives, etc [ ]; Personal savings[ ]; Bank loan[ ]; Loan from government establishment [ ]; Others (please specify)----------

7. Is the house worth the cost of purchase? Yes [ ]; No[ ]

8. Do you consider this house to be better than where you lived in before? Yes [ ] No [ ] Not sure [ ].

9. Why did you purchase and live in the house? ----------.

10. Do you plan to move out of the house in the nearest future? Yes[ ]; No[ ]; Not sure [ ];

11. If yes, please state why: ----------

1. Please tick the most appropriate description of your level of agreement /satisfaction

S/N	Factors	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The government policy on provision of the houses is fair					
2	The policy is fair to both male and female household heads on the estate					
3	The process through which you were allocated your unit gave equal access to all					
4	The allocation process was relatively easy					
5	The requirements for allocating the houses were clearly made known to all applicants					
6	The allocation process had too many hurdles					
7	Your house was designed and built without your involvement before you occupied it					
8	You had a free and fair chance to choose which housing unit to be allocated					
9	You would have chosen another unit than that allocated to you if given the chance					
10	You would have chosen another floor than that allocated to you if given the chance					
11	Children play areas are adequate					
12	Pedestrian footpaths are adequate					
13	Road network on the estate is adequate					
14	Greenery/ natural landscape is adequate					
15	The house is adequate(fitting) for your family size					
16	The number of bedrooms is adequate					

S/N	Factors	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
17	The sizes of bedrooms are appropriate					
18	The size of sitting/dining room is adequate					
19	Sanitary provision (toilet/bath) is adequate					
20	The house fits your social/economic status					
21	The house rightly fits your cultural needs					
22	The design of the building enhances privacy					
23	The entry to the house is private enough					
24	The territory of your house is well defined					
25	You have enlarged some spaces in your house to cater for new family needs.					
26	You are unable to put part of your house to economic/commercial use.					
27	You cannot alter your house design at all					
28	Distances between the blocks are adequate					
29	Social facilities are sited near enough to you.					
30	Blocks of houses are spaced too close					
31	You will describe your house as overcrowded					
32	The estate is overcrowded beyond measure					
33	The estate is over-commercialized					
34	The arrangement of the blocks of houses promotes a strong sense of community					
35	The estate promotes good neighbourliness					
36	The estate is too large for meaningful communal living					
37	The estate has been generally safe and secured					
38	Houses on estates are too open and					

	unsecured					
S/ N	**Factors**	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
39	You want to live here for a very long time					
40	If you were to move, you would like to live in another place like this?					
41	You would recommend this place to a friend if they were looking for a place to live					
42	The longer you stay in the estate the more satisfied you are.					
43	There is low-cost of maintenance of features in your house					
44	The longer you stay in your house the more the house deteriorates					
45	The longer you stay in your house the more the cost of maintenance					
46	The deterioration of the house over time does not affect your level of satisfaction					

	Section D: Housing Satisfaction	**Very satisfied**	**Satisfied**	**Neutral**	**Dis-satisfied**	**Very dis-satisfied**
1	How satisfied are you with this estate generally?					
2	How satisfied are you with this apartment?					
3	How satisfied are you with the procedure by which you obtained this apartment?					
4	How satisfied are you with the physical environment of this neighborhood?					
5	How satisfied are you with other residents of this community?					
6	How satisfied are you with the management rules & regulations on this estate?					

Please tick based on how adequate and satisfied you are with these elements

S/N	Factors - Physical element	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1	The number of rooms in your house is adequate					
2	The ceiling height is ok					
3	The size of the rooms is adequate					
4	The performance of foundations is satisfactory					
5	The number and position of electrical outlets is ok					
6	The scale and proportion of the floor plan is satisfactory					
7	The floor plan of your dwelling is ok					
8	Street design is good					
9	Your toilet(s) design is satisfactory					
10	The performance of roof is satisfactory					
11	Your Bathroom(s) design is satisfactory					
12	The number of bathroom(s) is ok					
13	Your plot size is adequate					
14	The kitchen design is ok					
15	The number of toilet(s) is					

	adequate					
16	The operation of windows is ok					
S/ N	**Factors - Physical element**	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
17	The operation of doors is ok					
18	The operation of electrical fittings is ok					
19	Quality of materials used in walls is good					
20	The operation of plumbing fittings is ok					
21	Quality of materials used in floors is good					
22	Quality of building materials is good					
23	Quality of paints is good					
24	The location of balcony is satisfactory					
25	The size of your balcony is adequate					
S/ N	**Economic element**	**Strongly Satisfactory**	**Satisfactory**	**Neutral**	**Not Satisfactory**	**Strongly Not Satisfactory**
1	Nearness of your house to religion / worship locations					
2	Nearness of your house to schools for children					
3	Nearness of your house to market/shopping centres					
4	Getting value for					

	your money					
5	The cost and effort needed to keep the house up					
S/ N	**Factors - Physical element**	**Strongly agree**	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
6	Nearness of your house to recreational facilities					
7	Nearness of your house to your workplace					
8	Low-cost of maintenance of features in your house					
	Behavioural element	**Strongly Satisfactory**	**Satisfactory**	**Neutral**	**Not Satisfactory**	**Strongly Not Satisfactory**
1	The level of privacy in your house					
2	Nearness to neighbours of different religion					
3	Open spaces, parks and reserves					
4	Individual space for each member of your household					
5	Building setback (distance from house to your property boundary) for outdoor living space, entertaining and parking.					
6	Distance of your building from the side boundary					

	fence					
S/N	**Behavioural element**	**Strongly Satisfactory**	**Satisfactory**	**Neutral**	**Not Satisfactory**	**Strongly Not Satisfactory**
7	Security level of your neighbourhood					
8	Distance of your building from the rear boundary fence					
9	The width of foot paths					
10	Off-street parking					
11	Colour(s) of paints used in the house					
12	Emergency/ Escape route					
13	Aesthetic appearance					
14	Nearness of your house to police station					
15	Adequacy of on-street parking					
16	Nearness of your house to medical facilities(hospitals / clinics)					
18	Nearness of your house to fire fighting station					
S/N	**Timing element and environmental elements**	**Very satisfactory**	**Satisfactory**	**Neutral**	**Not Satisfactory**	**Strongly Not satisfactory**
1	Level of deterioration of your building based on annual increase in repairs and maintenance cost					

S/N	Timing element and environmental elements	Very satisfactory	Satisfactory	Neutral	Not Satisfactory	Strongly Not satisfactory
2	The brightness of light in your house during the day time					
3	Indoor Air Quality					
4	Space for landscaping					
5	Noise level					
6	Water pollution					
7	Landscaping of streets (i.e., trees, hedges, grass etc.)					
8	Air pollution					
9	Accessibility to the disabled and aged people					
10	Source(s) of Water					
11	Drainage System					
12	Refuse disposal system					
13	Street lighting					
14	Ventilation of house					
	Dwelling Unit Features	**Very satisfactory**	**Satisfactory Agree**	**Neutral**	**Not Satisfactory**	**Strongly Not satisfactory**
1	Living area					
2	Dinning space					
4	Kitchen space					
5	Bedroom-1					
6	Bedroom-2					
7	Bedroom-3					
8	Toilet					

	Dwelling Unit Features	**Very satisfactory**	**Satisfactory Agree**	**Neutral**	**Not Satisfactory**	**Strongly Not satisfactory**
9	Bathroom					
10	Dry area					
11	Socket					
	Public Facilities	**Very satisfactory**	**Satisfactory Agree**	**Neutral**	**Not Satisfactory**	**Strongly Not satisfactory**
1	Accident situation					
2	Crime situation					
3	Security control					
4	Community Relations					
	Social Environment	**Very satisfactory**	**Satisfactory Agree**	**Neutral**	**Not Satisfactory**	**Strongly Not satisfactory**
1	Distance to nearest town center					
2	Distance to Work place					
3	Distance to school					
4	Distance to Police Station					
5	Distance to Hospital					
6	Distance to Shopping Center					
7	Distance to Market					
8	Distance to Public Library					
9	Distance to Religious Building					
10	Distance to recreational centre					
11	Distance to Bus Station					
12	Distance to fire Station					

APPENDIX 1C

Topic: PERFORMANCE EVALUATION OF STATE SUBSIDIZED HOUSING SCHEME: A CASE STUDY OF OGUN STATE HOUSING PROJECTS.

INTERVIEW SCHEDULE ON INSTITUTIONAL FRAMEWORK AND HOUSING DELIVERY METHODS
(FOR STAFF OF MINISTRY/CORPORATION/ORGANISATION PROVIDING THE HOUSING ESTATES)

1. Name of your Ministry/Corporation /Agency/Organization.----------
2. How is the board of your establishment constituted? What is its composition?
3. What is the present Management Structure of your establishment?
4. Which are the main departments and sub departments of your establishment?
5. What are the corporate objectives of your establishment?
6. What are the statutory functions of your establishment?
7. What are the Policy Organisational guidelines as regards provision of public housing?
8. How have your housing scheme been financed over the years?
9. Which state government ministries /organization are related closely with your organization as regards public housing provision in Ogun State? And in what ways?
10. What are the Organisation`s long term plans (if any) for the provision of housing for the low-income?
11. What are factors responsible for the Organisation`s decreasing emphasis on low-income housing and the increasing commercialization of housing provisions?
12. What is the present manpower profile of your organization?
13. Who decides what public housing projects are embarked upon and how are they financed?
14. To what extent is your organization autonomous of the state government in funding and budgeting decision relating to her function of public housing provision?
15. What are the policies guiding financial allocation to low, medium and high income housing schemes?
16. How does your organization obtain or procure land for her public housing projects?
17. What processes of planning approval (if any) do your public housing schemes have to go through?
18. What are the processes of arriving at architectural design decisions on the public housing schemes?
19. What are the processes of arriving at planning design decisions on the public housing schemes?
20. What are the construction policies and practices related to public housing provision?(eg.direct labour, contract approach, design and build).
21. How are the public projects supervised? (eg,in- house staff, private consultants involvement)
22. What are the policies and practices regarding the procurement of materials for public housing schemes?
23. What is the tenure status of the scheme and why?

24. What are the criteria for allocating your public housing units to owner-occupiers?
25. To what extent and in what ways are the final users involved in the housing delivery process?
26. What are the policies and practices relating to payment for the housing units allocated by your organization? (eg Part payment Short term installment payment, long term installment payment and full payment).
27. What are the policies and practices related to subletting and multi- purpose use of housing by owner-occupiers of your housing units?
28. What are the policies and practices related to conversion, alteration, renovation, or expansion of housing by owner-occupiers of your housing units?
29. To what extent is your organization involved in the estate management of your public housing schemes?
30. To what extent does your organization implement schemes improvement programs for your estates?
31. To what extent does your organization relate with the Resident`s Association in your public housing schemes?
32. What are the significant changes that have taken place in the housing delivery processes of your organization within the last ten (10) years?
33. What other suggestions would you like to make that would improve housing delivery process?
34. What other suggestions would you like to make that would improve the living conditions of the occupiers of your housing units?
35. What are the challenges you are experiencing with the occupiers of your housing estates?
36. Do you think the initial intention of the government for providing the housing schemes have been met? If not why?
37. Are the occupiers of your housing satisfied with their housing units? If not why?
38. Are the occupiers of your housing satisfied with their housing environment if not why?
39. Are the occupiers of your housing satisfied with their housing amenities and infrastructure? If not why?
40. Are the occupiers of your housing satisfied with the maintenance of their housing units? If not why?
41. Are the occupiers of your housing satisfied with their housing units? If not why?

APPENDIX1D

Plate1 :Laderin Estate

APPENDIX1E

Plate 2: Laderin Estate on Completion

APPENDIX1F

Plate3: Laderin Estate Side View

APPENDIX1F

Plate4: Asero Estate

APPENDIX 1H

Plate 5: Ijebu Ode Estate

APPENDIX 1I

Plate 6: Ijebu Ode Estate1

APPENDIX1J

Plate7: Ijebu Ode Estate 2

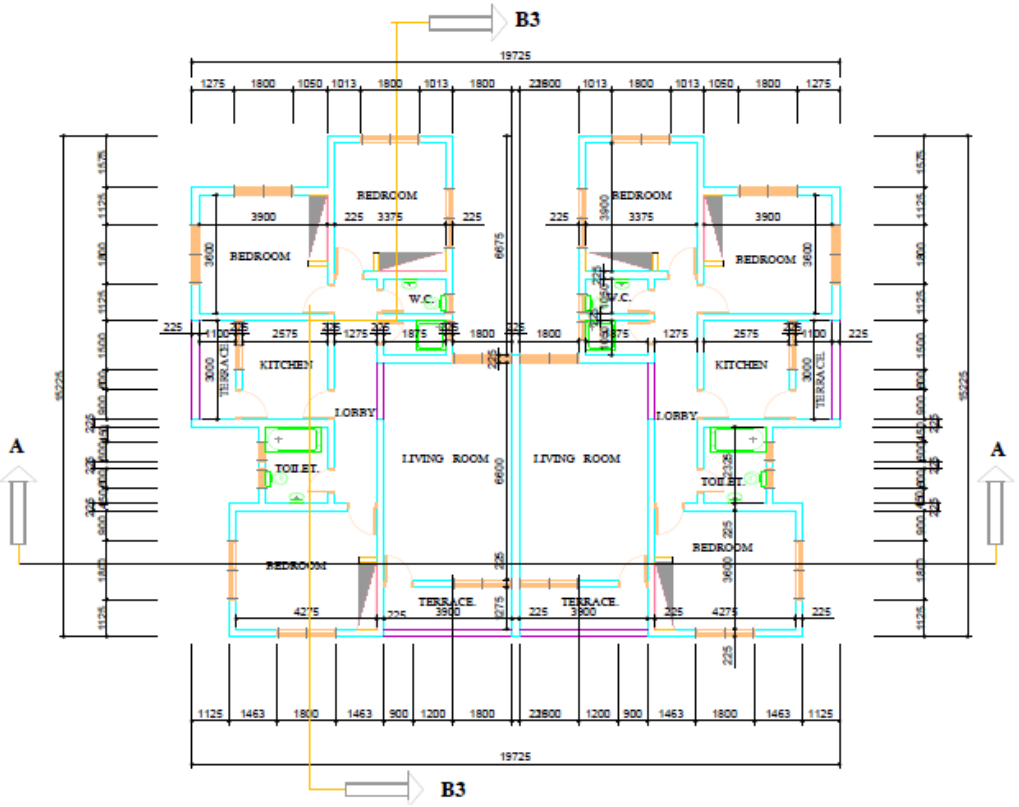
APPENDIX1K

Plate 8: Ijebu Ode Estate 3

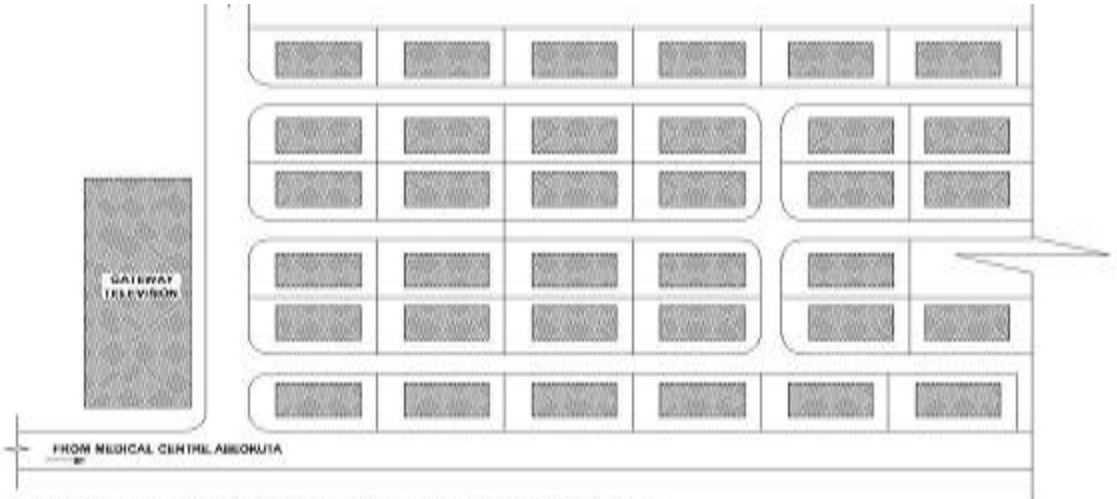
Plate 9: Media Village on completion

APPENDIX 1L

Floor Plan of Three Bedroom

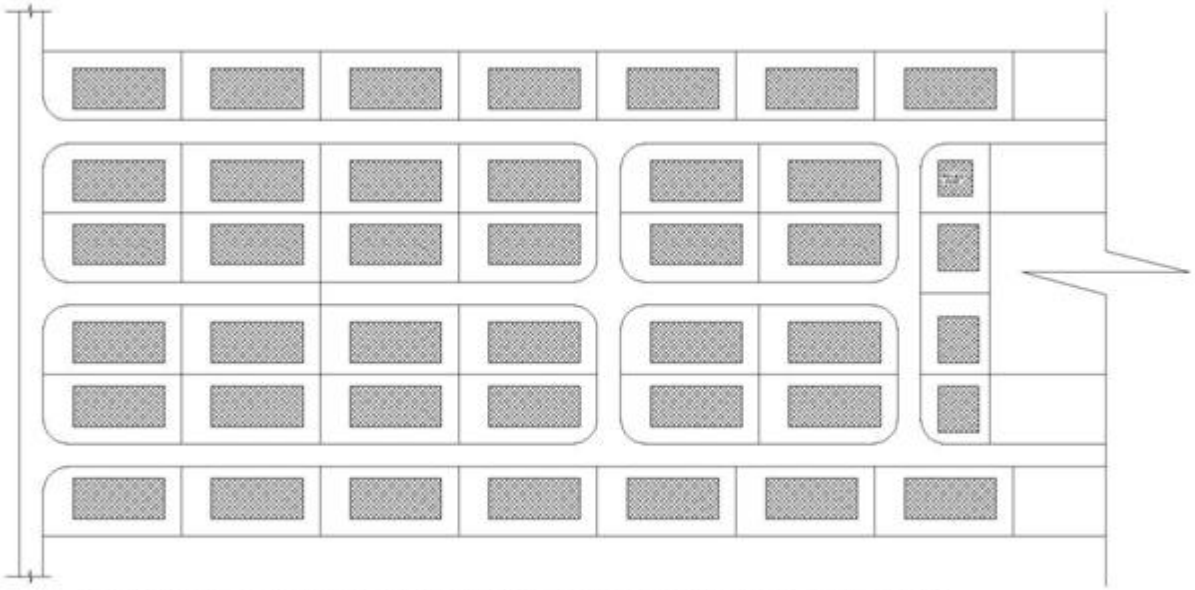


APPENDIX 1M



LAYOUT OF MEDIA VILLAGE - ABEOKUTA, OGUN STATE.

APPENDIX 1N



LAYOUT OF OGD HOUSING ESTATE, ASERO-ABEOKUTA, OGUN STATE.