AFFORDABILITY IN AMORTISATION OF PUBLIC URBAN WORKFORCE HOME OWNERSHIP IN SOKOTO, NIGERIA

By

HAYATU ALHAJI

Thesis submitted in fulfilment of the requirements

For the degree of

Master of Science (by Research)

April 2010

TABLE OF CONTENT

ACKNOWLEDGEMENT ii

TABLE OF CONTENTS iii

LIST OF TABLES vii

LIST OF FIGURES ix

LIST OF PLATES xii

ABSTRAK xiv

ABSTRACT xvi

CHAPTER ONE 1

1.0 Introduction 1

1.1 Background of the study 2

1.2 Statement of problem 3

1.3 Previous Related Research 3

1.4 Assumption 5

1.5 Research Questions 5

1.6 Objective of the study 6

1.7 Scope of the study 6

1.8 The Study Framework 7

1.9 Organisation of Chapters 9

CHAPTER TWO 11

URBAN HOUSING, AFFORDABILITY & HOME OWNERSHIP 11

2.1 Introduction. 11

2.2 Organisational Structure of the chapter 12

2.3 Urban Housing 13

2.4 Workforce housing 15

2.4.1 Factors establishing Workforce housing 15

2.5 Housing Affordability 18

2.5.1 Factors affecting Housing Affordability 19

2.5.2 Variables of Housing affordability 25

2.6 Home ownership 27

2.6.1 Home ownership affordability 28

2.6.1.1 Household income 31

2.6.1.2 Household size 31

2.6.1.3 Amortisation 32

2.6.1.4 Housing cost 35

2.6.1.5 Housing standard 35

2.6.1.6 Location 36

2.6.1.7 Public facilities 37

2.6.1.8 Critical workforce 37

2.7 Summary of All Checklist Factors 38

2.8 Summary 41

CHAPTER THREE 42

RESEARCH METHODOLOGY 42

3.1 Introduction 42

3.2 Methodology of the Research 43

3.2.1 Checklist Factors 46

3.2.1.1 Housing standard 48

3.2.1.2 Housing cost 48

3.2.1.3 Amortisation 49

3.2.1.4 Household income 50

3.2.1.5 Critical workforce 51

3.3.3 Quantitative study on Bafarawa housing estate 51

3.3.4 Questionnaire 52

3.3.5 Sampling Technique 55

3.4 Methodology of the analysis 56

3.4.1 Measurable Scale 56

3.4.2 Data processing technique 57

3.5 Summary 58

CHAPTER FOUR 59

URBAN WORFORCE HOUSING & HOME OWNERSHIP IN NIGERIA 59

4.1 Introduction 59

4.2 Structure of the chapter 60

4.3 Urban Housing in Nigeria 62

4.3.1 Public Urban Workforce housing in Nigeria 66

4.3.2 The Current Trends 69

4.3.3 Public Workforce housing in Sokoto 74

4.4 The Bafarawa housing estate 81

4.4.1 Category A: High Medium Cost 85

4.4.2 Category B: Medium Cost 92

4.4.3 Category C: Low Cost 99

4.4.4 Distribution of the housing units 111

4.5 Summary 114

CHAPTER FIVE 115

ANALYSIS OF RESULTS AND FINDINGS 115

5.1 Introduction 115

5.2 Analysis of the Collected Data 116

5.3 Result of the Analysis 118

5.3.2 Analysis of information on home ownership 123

5.3.3 Efficiency factors of the amortisation process 127

5.4 Findings 131

5.5 Summary.....133

CHAPTER SIX.....134

CONCLUSION AND RECOMMENDATION 134

6.1 Introduction 134

6.2 Summary of key findings 135

6.3 Discussion.....137

6.3.1 Objective 1.....137

6.3.2 Objective 2.....138

6.3.3 Objective 3.....138

6.4 Conclusion.....141

6.5 Recommendations 141

6.6 Proposed future research studies 142

REFERENCES 144

LIST OF TABLES

		Page
Table 2.1	Contemporary uses of housing expenditure--to-income ratio	30
Table 2.2	Monthly mortgage home ownership cost	33
Table 2.3	Summary of Factors based on Principal Factors	39
Table 2.4	Summary of Checklist Factors	39
Table 3.1	Table of Checklist factors	47
Table 3.2	Respondents' background	53
Table 3.3	Information on home ownership	54
Table 3.4	Administration of questionnaires according to housing types	55
Table 4.1	Distribution of Public Workforce housing units in Sokoto	74
Table 4.2	Summary of 481 Bafarawa Estate housing units by type	83
Table 4.3	Checklist Data on 3 bedrooms Satellite A	86
Table 4.4	Checklist Data on 3 bedrooms Satellite B	91
Table 4.5	Checklist Data on 2 bedrooms Ijanikin	94
Table 4.6	Checklist Data on 2 bedrooms Isheri A	98
Table 4.7	Checklist Data on 2 bedrooms Isheri B	101

Table 4.8	Checklist Data on 2 bedrooms Satellite A	**106**
Table 4.9	Checklist Data on 2 bedrooms Satellite B	**110**
Table 4.10	Distribution table of housing units at Bafarawa housing estate by Ministries/ Departments for Officers on G.L 07 – 09	**111**
Table 5.1	5-Scale ranking of factors responsible for the efficiency of the amortisation process and RII score	**128**

LIST OF FIGURES

		Page
Figure 1.1	The Study Framework	7
Figure 2.1	Organisational structure of chapter two	12
Figure 2.2	Factors affecting housing affordability	20
Figure 2.3	Variables of housing affordability	25
Figure 3.1	Research Methodology	44
Figure 4.1	Structure of chapter four	60
Figure 4.2	Home ownership status of workforce housing in Sokoto	76
Figure 4.3	Map of Sokoto state	81
Figure 4.4	Site for Bafarawa housing estate	82
Figure 4.5	Site Layout plan for Bafarawa housing estate	83
Figure 4.6	Floor plan 3 bedrooms Satellite A	85
Figure 4.7	Side elevation 3 bedrooms Satellite A	86
Figure 4.8	Section 3 bedrooms Satellite A	86
Figure 4.9	Floor plan 3 bedrooms Satellite B	89
Figure 4.10	Front view 3 bedrooms Satellite B	90
Figure 4.11	Section 3 bedrooms Satellite B	91

Figure 4.12	Floor plan 2 bedrooms Ijanikin	**93**
Figure 4.13	Front view 2 bedrooms Ijanikin	**93**
Figure 4.14	Section 2 bedrooms Ijanikin	**94**
Figure 4.15	Floor plan 2 bedrooms Isheri A	**96**
Figure 4.16	Front view 2 bedrooms Isheri A	**97**
Figure 4.17	Section 2 bedrooms Isheri A	**98**
Figure 4.18	Floor plan 2 bedrooms Isheri B	**100**
Figure 4.19	Entrance view 2 bedrooms Isheri B	**101**
Figure 4.20	Section 2 bedrooms Isheri B	**101**
Figure 4.21	Floor plan 2 bedrooms Satellite A	**104**
Figure 4.22	Front view 2 bedrooms Satellite A	**105**
Figure 4.23	Section 2 bedrooms Satellite A	**106**
Figure 4.24	Floor plan 2 bedrooms Satellite B	**108**
Figure 4.25	Front view 2 bedrooms Satellite B	**109**
Figure 4.26	Section 2 bedrooms Satellite B	**110**
Figure 5.1	Summary of respondents by sex	**119**
Figure 5.2	Summary of respondents by number of People in their family	**119**

Figure 5.3	Summary of respondents by their salary Grade levels	**120**
Figure 5.4	Summary of respondents by their monthly Income earnings (in Nigerian Naira)	**121**
Figure 5.5	Summary of respondents by their years of civil service experience	**122**
Figure 5.6	Analysis of Respondents' information by the years houses were allocated to them	**123**
Figure 5.7	Analysis of Respondents' information by the current house ownership status	**124**
Figure 5.8	Respondents' information by reason for the current house ownership status	**125**
Figure 5.9	Respondents' information by categories of fixed monthly deductions	**126**
Figure 5.10	Respondents' information by proportion of deductions to monthly income	**127**

LIST OF PLATES

		Page
Plate 4.1	Dangote staff quarters, Lagos Nigeria	63
Plate 4.2	A private residential quarters, Lagos Nigeria	63
Plate 4.3	Fritt Hill apartments, Lagos Nigeria	64
Plate 4.4	Colonial duplex at Badagry, Lagos Nigeria	65
Plate 4.5	Colonial duplex at Badagry, Lagos Nigeria	65
Plate 4.6	Garki public workforce housing, Abuja Nigeria	68
Plate 4.7	Nigerian police quarters at Jibi, Abuja Nigeria	68
Plate 4.8	Nationwide prototype Low-income housing Sokoto Nigeria	69
Plate 4.9	500 units' public/private partnership housing scheme in Sokoto	72
Plate 4.10	500 units' Government direct housing scheme	73
Plate 4.11	Satellite image of Sokoto showing location of workforce housing units	75
Plate 4.12	G.R.A Quarters	76
Plate 4.13	Yauri Flats	77
Plate 4.14	Sokoto East	77
Plate 4.15	F.H.A Quarters	78

Plate 4.16	Bado Quarters	**78**
Plate 4.17	Mana Babba	**79**
Plate 4.18	Badon Godabe	**79**
Plate 4.19	Badon Godabe	**80**
Plate 4.20	Pictorial view of 3 bedrooms Satellite A	**87**
Plate 4.21	Pictorial view of 3 bedrooms Satellite B	**91**
Plate 4.22	Pictorial view of 2 bedrooms Ijanikin	**94**
Plate 4.23	Pictorial view of 2 bedrooms Isheri A	**98**
Plate 4.24	Pictorial view of 2 bedrooms Isheri B	**102**
Plate 4.25	Pictorial view of 2 bedrooms Satellite A	**106**
Plate 4.26	Pictorial view of 2 bedrooms Satellite B	**110**

TAHAP KEMAMPUAN PEMILIKAN RUMAH OLEH TENAGA KERJA SEKTOR AWAM DI SOKOTO, NIGERIA

ABSTRAK

Kajian penyelidikan ialah mengenai kajian tahap kemampuan pemilikan rumah oleh tenaga kerja dalam sektor awam di bandar di Nigeria, dengan fokus utama mengenai tahap kemampuan mereka dalam melunaskan bayaran pinjaman. Penyelidikan ini merangkumi kajian literatur mengenai tahap kemampuan pembeli dalam pemilikan rumah dan pinjaman wang yang disediakan oleh kerajaan; dan tahap kemampuan pemilikan rumah berasaskan pendapatan isi rumah, dan hubungannya dengan keadaan dan jenis rumah yang dibeli. Kajian literatur menunjukkan bahawa tahap kemampuan pemilikan rumah dapat diukur dan diinterpretasi dengan kos pembelian rumah dan pendapatan bulanan isi rumah; walaubagaimanapun, ia tidak dapat menunjukkan tahap kemampuan sebenar dalam pelunasan bayaran pinjaman perumahan walaupun secara faktanya, bayaran berkala yang efisien diambil dalam proses pelunasan bayaran pinjaman perumahan dirujuk berasaskan daripada tahap kemampuan pemilikan rumah oleh seseorang pembeli. Satu kaji selidik rintis dikendalikan ke atas tenaga kerja sektor awam yang memiliki rumah di Nigeria dan hasil kajiannya mendapati lebih 50% unit-unit perumahan daripada jumlah keseluruhannya yang diperuntukkan dijual semula atau disewa oleh pemilik rumah tersebut. Ia menunjukkan kaji selidik secara terperinci diperlukan untuk mengenalpasti mengapa perkara ini berlaku semasa proses pelunasan bayaran dalam skim pinjaman perumahan yang dianggap efisien dalam sistem pembelian rumah mampu-milik ini. Kajian ini mempunyai dua kaedah kaji selidik yang berbeza iaitu kajian kualitatif terhadap pemilik rumah yang menghuni rumah mampu milik kerajaan di Sokoto, Nigeria; dan kajian kuantitatif berasaskan soalan-soalan bancian. Dalam bancian ini, responden-responden menjawab soalan-soalan berasaskan faktor-

faktor ukuran (dikenalpasti semasa kajian literatur) yang mempengaruhi tahap efisiensi dalam proses pembayaram pinjaman perumahan. Hasil analisis menunjukkan 29% daripada penerima-penerima pinjaman perumahan ini memberi jawapan bahawa sistem bayaran balik pinjaman perumahan ini adalah memuaskan manakala majoriti responden mendakwa mereka tidak mampu dengan potongan bulanan untuk bayaran pinjaman perumahan ini kerana ia adalah tinggi berbanding dengan pendapatan gaji mereka. Lebih 60% daripada responden memberi jawapan bahawa potongan ini adalah lebih daripada 40% berbanding dengan pendapatan gaji bulanan. 20% daripada gaji bulalan kajian ini mendapati merupakan cadangan tahap kemampuan untuk cos. Penulasan bayaran berkata dengan tempoh selama 30 tahun.

AFFORDABILITY IN AMORTISATION OF PUBLIC URBAN WORKFORCE HOME OWNERSHIP IN SOKOTO, NIGERIA

ABSTRACT

This research study is based purely on the home ownership of public urban workforce housing in Nigeria, with particular focus on affordability in amortisation. Literature on affordability in housing expressed affordability as a relationship between household and their housing situation, and that home ownership affordability can be measured and interpreted by the cost of housing and household's monthly income, however, it does not specifically address actual home ownership affordability in amortisation despite the fact that the efficiency of the amortisation process in home ownership is assumed to have influence on affordability. A pilot survey was conducted on public owner-occupier workforce housing in Nigeria and it was discovered that over 50% of the entire housing units allocated to the workforce were either sold out by the beneficiaries, or given out for rent. This led to a full survey with an objective of identifying the effects of the efficiency of amortisation process in home ownership affordability. The methodology employed involved a quantitative study of public owner-occupier urban workforce housing in Sokoto, Nigeria. Quantitative data was obtained using questionnaires in which respondents were asked relevant question on factors believed to have influence on the efficiency of the amortisation process. The result of the analysis indicated low percentages (29%) of the beneficiaries were satisfied with the amortisation process, whereas the majority claimed they could not bear the level of deduction as a result of high monthly amortisation cost. The monthly amortisation cost made up a significant portion of the monthly incomes of

beneficiaries as more than 60% of the respondents reported that the deductions made up over 40% of their income. The study recommends that 20% of monthly income and 30 years are the appropriate monthly amortisation cost and period respectively.

CHAPTER ONE

1.0 Introduction

Home ownership is a legal right to possession of a residence by a person, family or households. According to Hulchanski (1999) home ownership is characterised by housing 'tenure', and housing tenure can primarily be categorized into two (2); rental and owner occupier. Housing affordability on the other hand and according to Stone (2006a) relates to individuals constituted as households in relation to their housing situation. Literature on definition and interpretation of affordability in housing have been laying much emphasis on two primary factors in home ownership affordability namely; income and housing cost, however less has been expressed on amortisation process which this research considers to have significant influence on home ownership affordability, especially the impact of housing cost to the monthly cash income of households even in subsidised housing like public urban workforce housing.

Subsidy in housing plays an important role in bringing down the cost of a housing unit to an appreciable level which in most cases applies to public urban workforce housing, and significantly enhance affordability in home ownership; however the inefficiency of amortisation process can overshadow the positive effect of subsidy to affordability in housing programme. It is in this thrust that this research tends to study the home ownership of public urban workforce housing in Nigeria with particular focus on affordability in amortisation, in order to highlight the influence of amortisation process in home ownership and also propose guidelines on efficient amortisation process in home ownership of public urban workforce housing.

1.1 Background of the study

Home ownership of urban workforce housing in Nigeria has been on rental tenure ship since in the 18th century during the colonial period, (Olotuah, 2000b) until recently when government started changing its course to mortgage, and owner-occupier home ownership of the entire existing urban workforce housing in the country.

The current policy drive in the country is geared towards affordable housing delivery for home ownership in both owner-occupier and mortgage ownership. This is evident in the monetisation process commenced in the year 2001 by the Federal government, with a policy drive in sales of houses to the workers in the public sector (i.e. the workforce) in Abuja, which has also been spreading to some states within the country. While the owner-occupier scheme that is tied to mortgage was observed to have low interest rate of not more than 5% (Sanusi, 2003) and a considerable amortisation period, the owner-occupier scheme based on monthly deduction from salary has a considerable level of subsidy, but with a short amortisation period.

Much emphasis has been laid on providing a considerable level of subsidy to bring the cost of the housing units to an appreciable level of affordability in the owner-occupier scheme, but the affordability in terms of amortisation of the housing units by the individuals or group of households of varying incomes is not given much attention. It is essential to stress that the ability of households to comfortably upset housing cost in amortisation is equally as important as the subsidy. It is in this thrust that this research tends to study the home ownership of urban workforce housing in Nigeria with focus on affordability in amortisation, using Bafarawa workforce housing estate in Sokoto city of Nigeria as a case study.

1.2 Statement of problem

The Sokoto State government commenced owner-occupier home ownership scheme in 2003 with housing units allocated to the workforce in the state based on monthly deduction from salary. However, a pilot survey conducted in Sokoto, indicated that over 50% of the entire housing units allocated to the workforce were either sold out by the beneficiaries, or given out for rent.

Recently in 2008, the State government embarked on a Four (4) years rolling plan for the provision of a total figure of 2,000 housing units of government direct provision at a rate of 500 units per annum. The first 500 units for the year 2008 are at various stages of completion, and the prime target group as mentioned by the government of the state are the workforce. What will be the fate of this fourth coming home ownership?

This study attributed the problem to financial stress on income due to high housing cost in the amortisation system which was based on monthly deductions from salary, and hence the study on home ownership affordability of urban public workforce housing in Nigeria, with particular focus on affordability in amortisation.

1.3 Previous Related Research

Literature on 'Housing Affordability' (Hancock, 1993; Goodman, 2001; Stone, 2006b) defined housing affordability as an expression of the social and material experiences of people, constituted as households in relation to their individual housing situation. Furthermore, (Reynaud, 1991; Whitehead, 1991; Hancock, 1993; Hulchanski, 1995; Goodman, 2001; Barbara, & John, 2002; Susanne, & Juan, 2002; Stone, 1990,

2006a) indicated two principal factors that define housing affordability namely; housing cost and household income. It is the way by which these factors interact that determines if a household is in need of affordable housing.

Various methods of approach to defining housing affordability have been developed and used by researchers. It was identified in the studies conducted by; Feins and Lane (1981), Hancock (1993), Hulchanski (1995), that the relationship between housing costs and incomes can be computed mathematically either as a ratio or as a difference. These two approaches are the formal foundations of the prevailing affordability paradigm. In practice, however, there appears to be a greater variety of different approaches to defining housing affordability.

Literature on workforce housing (Carol, 2002; NAHB, 2004) suggested that; 30% of household income should be the maximum threshold of affordability, and home ownership of homes should be priced and financed in 30 years fixed-rate monthly terms of amortisation equal to approximately 15% to 45% of the median household income. However, (Hulchanski, 1995; Goodman, 2001; Stone, 2006a) argued that the use of 'rule of thumb' (i.e. allocating a certain proportion of income as a threshold of affordability) does not measure what its users claim it is measuring, whatever the percentage selected. This is due to the important role that personal preferences play in housing choice and other consumer decisions. Furthermore, households earning identical incomes may not be able to afford the same products as a result of either household size or individual spending habits; however this rule was observed to be used in policy documents for America, U.K, Canada, and other parts of the world.

Home ownership according to Hulchanski (1999) is characterised by housing 'tenure', and all housing has two key functions; for the occupant, it serves as a useful purpose as a habitat for sustaining human life; for the owner, it serves as an economic investment. Furthermore, he explained that owner-occupied housing combines in the same person(s) both this functions. The owner is both the occupant and the investor, unlike in rented housing where the functions are held separately: one party occupies the rental unit, another party owns it. Home ownership affordability also, according to Goodman (2001) can be measured and interpreted by the cost of housing and the household monthly cash income. It was observed however that most of the studies do not specifically address home ownership affordability in amortisation despite the fact that the efficiency of the amortisation process in home ownership can have influence on affordability.

1.4 Assumption

Amortisation process causes affordability problem in home ownership of public urban workforce housing in Sokoto Nigeria.

1.5 Research Questions

The study intends to address the following questions;

1. What are the factors that affect affordability in home ownership of workforce housing?
2. How does amortisation process affect home ownership affordability?
3. Why is amortisation important to home ownership affordability of public urban workforce housing in Sokoto, Nigeria?

1.6 Objective of the study

The objectives of the study are as follows:

1. To identify the factors that affect home ownership affordability of workforce housing.

2. To use the relevant factors in analysing the affordability in amortisation of public urban workforce home ownership in Sokoto, Nigeria.

3. To identify the effect of amortisation to affordability in home ownership of public urban workforce housing in Sokoto, Nigeria.

1.7 Scope of the study

The scope of this research is limited to quantitative study on the amortisation process in the home ownership of public owner-occupier workforce housing in Sokoto, Nigeria. It covers the home-ownership scheme of all the different housing types at Bafarawa workforce housing estate in Sokoto that were allocated to civil servants working under the Sokoto state government which was based on direct deduction from salary. The period covered by the study is from the year 2003 (the first owner-occupier scheme in the state) to the year 2008. Samples collected were limited to officers on salary grade level GL.07, 08, 09 and 10 whom according to classification are the medium income groups in the state. The generalisation of this study is thus limited to medium-income group in the country that falls under the same salary group. Sokoto is the capital city of Sokoto state, and is located in the north-western region of the country. It was one time the capital of north-western region, administering the affairs of one quarter of the country.

1.8 The Study Framework

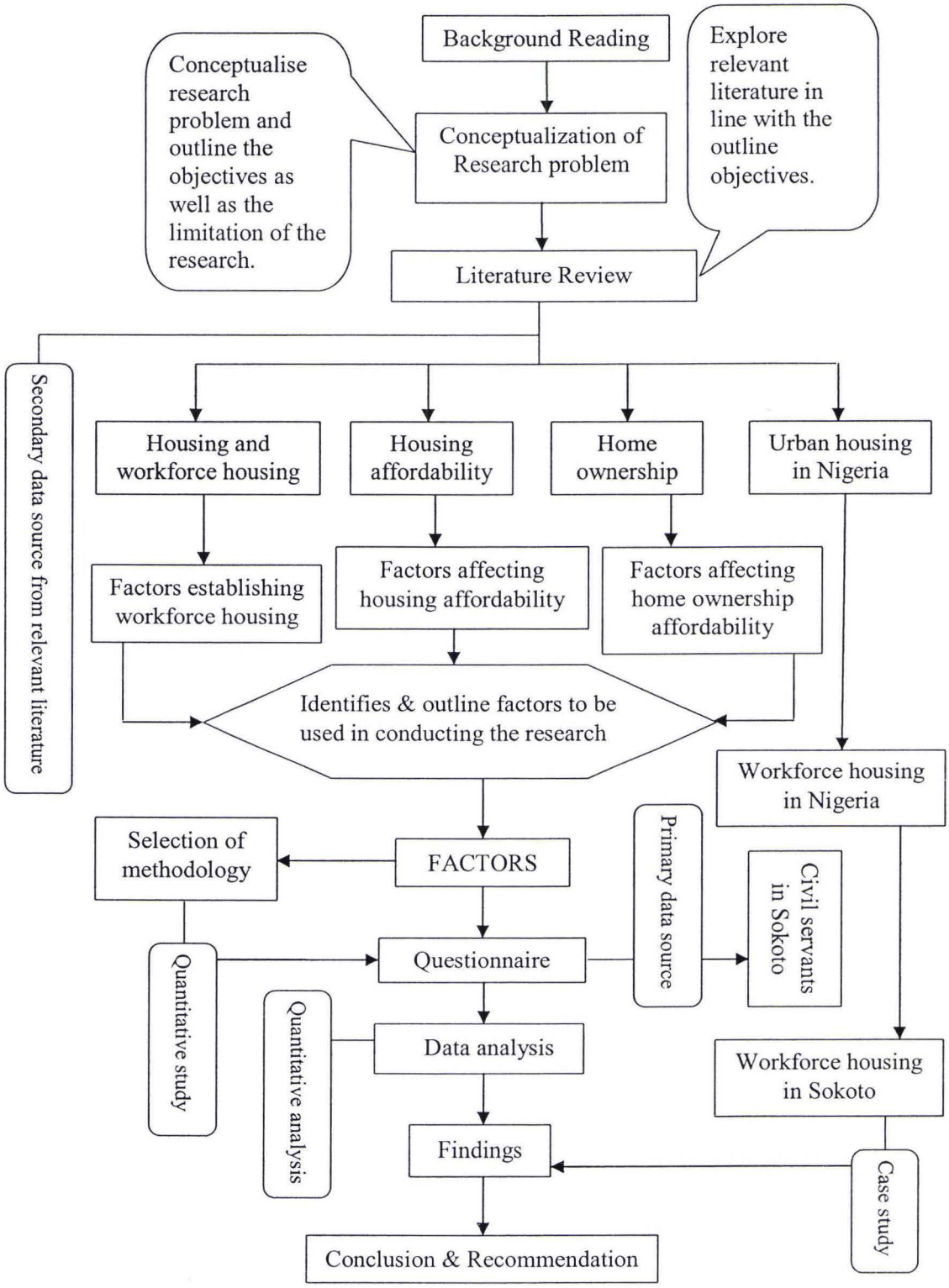

Fig 1.1 The Study Framework

From fig. 1.1, the study is focused on identification of factors that affects home ownership affordability which will be used in conducting this research with particular emphasis on. It was developed from background reading and active participation in debates and conferences on the general problems of housing delivery in Nigeria, which also lead to the conceptualization of the research problem, objectives and limitation of the study.

Stage two reviews the relevant literature. It includes the study and understanding of the terms 'housing', 'workforce housing', 'housing affordability', 'home ownership' and 'amortisation'. The principal factors establishing workforce housing and factors that affect housing affordability as well as home ownership are identified and outlined for consideration in the study. These factors are further explored and harmonised with the principal factors establishing workforce housing to come up with the general checklist of factors affecting home ownership affordability from which the relevant factors to be used in the methodology of the study are deducted.

The third stage reviews the general urban workforce housing and home ownership in Nigeria narrowing the secondary data to the selected case study area. Data required as outlined in the checklist factors are related to the actual housing situation. Questionnaire is also developed at this stage, and administered in the selected study area, comprising of key questions that are developed from the factors considered responsible for the efficiency of the amortisation system to capture the primary data for the analysis.

Stage four and the final stage, analyses data obtained from the administered questionnaire in the study area to determine the current housing outlays in the amortisation system of the owner-occupier home ownership of the workforce housing in the study area, as well as make meaningful deductions as findings and recommendations drawn.

1.9 Organisation of Chapters

CHAPTER ONE: Introduction.

This chapter is an introduction of the entire study as well as; Background of the study, Statement of the problem, Highlights on review of related literature, assumption, research questions, objective of the study, and the research framework (the conceptual structure of the thesis).

CHAPTER TWO: Literature Review on; housing, Affordability & Home ownership:

This chapter provides definitions of the terms 'housing', 'workforce housing', 'home ownership', 'affordability in housing' and 'amortisation'. The principal factors establishing workforce housing are outlined as well as the factors affecting housing and home ownership affordability. Variables of housing affordability are also outlined with their surrounding factors, leading to discussion on the relevance of each factor and deduction of checklist items that will be used in conducting the research. This is to provide an understanding of the subject, as well as to make deductions on the factors that will be used for the research.

CHAPTER THREE: Research Methodology.

This chapter discusses the methodology used in conducting this research. It highlights the checklist factors used as obtained in chapter two and explain the

methodology of analysis, which includes the survey/sampling technique, scaling system, and data processing technique etc.

CHAPTER FOUR: Urban workforce housing & Home ownership in Nigeria.

Discussion in this chapter is centred on Urban and Workforce housing provision in Nigeria. Secondary data as obtained on the study area, including location map, site lay-out plan, the housing units under study are presented. This data is presented in line with the outlined checklist items as outlined in chapter three.

CHAPTER FIVE: Analysis.

Primary data obtained from the administered questionnaires is analysed using the methodology explained in chapter three, and presented as findings of the study.

CHAPTER SIX: Summary and Conclusion.

The chapter presents a summary and conclusion of key findings, and recommendation drawn from this study.

CHAPTER TWO

URBAN HOUSING, AFFORDABILITY & HOME OWNERSHIP

2.1 Introduction.

This chapter provides the definitions and understanding of the terms 'urban housing', 'workforce housing' 'affordability in housing' and 'home ownership. The principal factors establishing workforce housing are outlined and discussed. The variables of Housing affordability from the general school of thought are drawn with the factors surrounding each variable outlined to make deductions on the factors that affects housing as well as home ownership affordability. The discussions focus is on establishing a general list of factors that affects home ownership affordability but emphasis is on establishing a checklist that will guide the study on affordability in amortisation for home ownership of workforce housing. The chapter concludes with a table of checklist factors and a review of all the discussions in the chapter.

2.2 Organisational Structure of the chapter

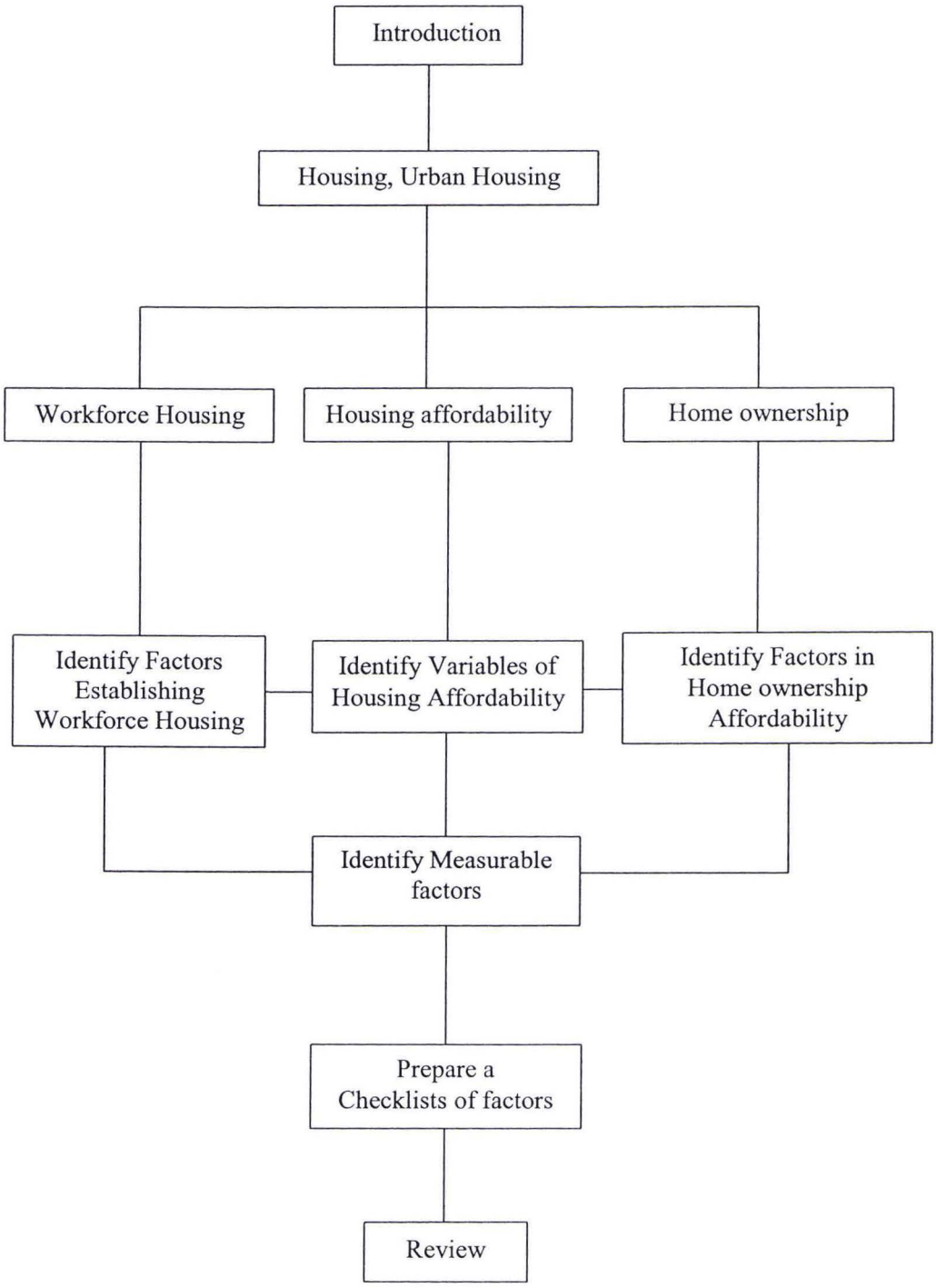

Fig 2.1 Organisational structure of chapter two

Literature organisation in this chapter is as shown in fig. 2.1, it presents the general definition of urban housing, and workforce housing, with further discussion on the principal factors establishing workforce housing as obtain from literature. This is followed by discussion on the term 'Housing Affordability', to provide an in-depth understanding of the term which will guide the conducting of this research. The factors affecting housing affordability are discussed to identify the variables of housing affordability as well as the primary factors of each variable. The variables of housing affordability are drawn and the various factors surrounding them are outlined and discussed to enable deduction on the principal factors affecting housing affordability as well as highlight the relevance of amortisation as a factor in housing affordability.

The principal factors establishing workforce housing and the factors surrounding the variables of housing affordability are then harmonised to come up with a general checklist factors for the general research study on workforce housing in respect to housing affordability as well as home ownership.

Home ownership and the factors affecting home ownership are then discussed with specific discussion on amortisation in home ownership in order to identify the primary factor that affects affordability in amortisation. The chapter concludes with a checklist of factors and a review of all the issues discussed in the chapter.

2.3 Urban Housing

'Housing' according to Listokin, & Burch ell (2007) can be referred to as shelter, permanent shelter for human habitation. Because shelter is necessary to everyone, the

problem of providing adequate and affordable housing has long been a concern not only to individuals but to governments as well. Thus, the history of housing is inseparable from the social, economic, and political development of humankind. In other words, housing encompasses the immediate environment, sanitation, drainage, recreational facilities, and all other economic and social activities that make life worthwhile (Otegbulu, 1996). This implies that housing does not only provide shelter for human habitation, but also encompasses the physical structure, economic and social activities in addition to the immediate surrounding environment.

The definition of housing however, is difficult when a single country or the economically advanced areas as a group are considered, is compounded in an international context that includes poor as well as rich nations, world regions sharply differing in climate, and societies with highly diverse cultures. That housing renders a bundle of services and the importance attached by occupants to each of them vary widely among many nations as well as within nations. Services differ so much; in fact that housing represents one of the most heterogeneous products.

Housing is a fundamental need of man without which his very existence is under threat. Yakubu (1980) described housing as a sine-qua-non of human living, and as an index of the standard of living of a people. According to Michael (2003) housing is an economic development driver for cities. This is why housing is a critical component in the social, economic, and health fabric of all nations, and most nations, in one form or another, continue to place access to affordable housing at the top of their priority lists; thus the place of housing in human life and the development of the society make housing a primary concern and its affordability highly essential.

Urban was derived from Latin word *"urbs"* which means "city". The word city was also derived from the Latin word *"civitas"*, which denotes a community that administers its own affairs. It represents a place in which man has attained the most advanced state of social organization and behaviour, and citizens with right of citizenship live a civil life. Urban therefore connotes an environment in which man-made structures such as housing, roads etc. have turned to dominate natural surroundings. Urban housing therefore simply refers to city housing. Bena (2004)

2.4 Workforce housing

'Workforce housing' is a relatively new term that is recently gaining increased popularity among planners, government administrators and housing activists, and is gaining cachet with home builders, developers and lenders in America and some part of the world. NAHB (2004) Workforce housing can refer to almost any housing, but always refers to affordable housing. (NAHB; Carol 2002)

2.4.1 Factors establishing Workforce housing

Studies conducted (Carol, 2002; NAHB 2004; Jacqueline and Teresa 2005; Melissa 2005; Jeannette, 2005) revealed that workforce housing is defined by four principal factors namely; affordability, home ownership, critical workforce and proximity.

a) Affordability

Affordability in is defined by a housing that costs no more than 30% of a household monthly income; a ratio of 30% out of household monthly income is the maximum threshold of affordability. (Bourassa, 1996; HUD; NAHB, 2004) This suggestion however has been argued as baseless and unscientific by various scholars such as; Goodman (2001), Hulchanski (1995) and Stone (2006).

Factor: - **Affordability cost** = Price impact of cost on income $\leq$ 30% of income.

b) Home ownership

Home ownership of workforce housing is defined by fee-simple ownership of (single-family with possibility of expanding) homes with yards, one of the least efficient but perhaps the most personally satisfying land use forms. (NAHB, 2004; Jeannette, 2005; Jacqueline and Teresa 2005) Ideally, and according to NAHB (2004) workforce housing aims at providing for ownership of homes priced and financed in at least 30 years fixed-rate monthly terms.

Factors:

Family ownership → { **Housing standard** = family home with yards; **Family size** = single family with possibility of of expanding in size }

Cost (amortisation cost) = simple-fee on fixed monthly terms.

Time frame (amortisation period) = 30 years amortisation period

} **Amortisation**

c) Critical workforce

According to Carol (2002), workforce housing implies to housing intended to appeal to key members of the workforce such as police officers, firemen, teachers, nurses and medical technicians, office workers, etc., whom are considered as the backbone of any successful community. From this definition, it is evident that the critical workforce refers to the low and medium income group, whom are subjected to the term affordability in housing, because those on the high income group can virtually afford any housing type of their choice.

Factor: - **Critical workforce** = officers on medium and low income group

d) proximity

Studies conducted (NAHB, 2004; Anne 2003; Melissa, 2005) suggested that workforce housing is located in or near employment centres (as opposed to distance suburbs) and is sometimes cited as one antidote to urban sprawl, with its accompanying traffic congestion, lengthy commutes, convenience stores and strip retail centres. Melissa (2005) further expressed that location and commuting has effect on affordability and housing choice of households.

Factors;

Location ⟶ Close or near employment centre

Public facilities = availability of: ⟶
- Market/Convenience stores
- Schools
- Bank
- Transportation etc

2.5 Housing Affordability

The roots of academic studies on housing affordability can be traced to the nineteenth century's studies of household budget (Feins, & Lane 1981) they all argued in favour of "one week's pay for one month's rent" (i.e. 25% of income) this implies that it is envisaged that families can and should spend about one quarter of their income for housing rent or cost. By implication, households are said to have housing affordability problem when they pay more than this proportion of their income to consume suitable levels of housing. In Canada it was reported by Hulchanski (1993, 1995) Bacher (1993) reported that a lower percentage of 20% rule was used in the early 19th century until in the 1950s when a 25% rule came into use only to be replace in the 1980s by 30% as defined by HUD and NAHB mentioned earlier. It was also indicated in the studies conducted by Lerman & Reeder's (1987). Reported in Australia by Bourassa (1996), reported in rental home ownership in America by Treskon, & Pelletierre (2004) Also in England, the use of this percentage was reported by Stone (2006a).

The definition, measurement and interpretation of housing affordability however are ultimately subjective. 'Housing Affordability' is a technical term subject to debate, and means different thing to different people: - 'Housing Affordability' according to Whitehead (1991) refers to "the opportunity cost of housing vis-à-vis other goods and services". According to Hancock (1993) "affordability is concerned with securing some given standard of housing (or different standards) at a price or rent which does not impose, in the eyes of some third party (usually government), an unreasonable burden on household income." The phrase 'unreasonable burden' illustrate that certain amount of non-housing consumption, such as food, clothing etc. is considered to be the minimum standard in

society. Susanne, & Juan (2002) expressed housing affordability as a "public policy target that moves in three-dimensional space measured by home prices, household income and mortgage interest rates." Felix (2003) viewed it as; an issue of income and abject poverty on one hand, and housing finance affordability on the other hand; an issue of accessibility to housing finance reduced access to land and high cost of construction. According to Stone (1990; 1993; 2006a, 2006b, 2006c) it is an expression of the social and material experiences of people, constituted as households in relation to their individual housing situation. From all this interpretations, it is evident that housing affordability has been used to encapsulate housing difficulties facing individuals or group of households.

This study does not attempt to resolve these issues regarding affordability measurement and interpretations; it is more concerned in highlighting the variables of housing affordability and the factors that surround each variable, particularly the factors that affects home ownership affordability of urban workforce housing. Fundamentally it recognizes that affordability is a public policy target, and relates to individual constituted as households in relation to their housing situation. According to Hulchanski (1999) policy statements about affordable housing can only be interpreted in a qualitative manner, however a range of information can help the appropriate decision making body arrive at interpretative judgement. Hulchanski (1999)

2.5.1 Factors affecting Housing Affordability

Affordable housing is generally expected to adequately satisfy the needs of low- and medium-income households at a costs below those generally found in the market. It may take a number of forms that exist along a continuum – from emergency shelters, to

transitional housing, to non-market rental (also known as social or subsidized housing), to formal and informal rental, and ending with affordable home ownership. The interactions of some factors determine if a household is in need of affordable housing or is able to affordably enter the home ownership market. (Goodman, 2001) Sharon, & William (2007) illustrate (Fig. 2.2 below) and outlined the factors affecting housing affordability over time, and hence the need for affordable housing. These factors are;

a) Land and labour cost,

b) Housing market,

c) Population increase,

d) Income increase,

e) Interest rate.

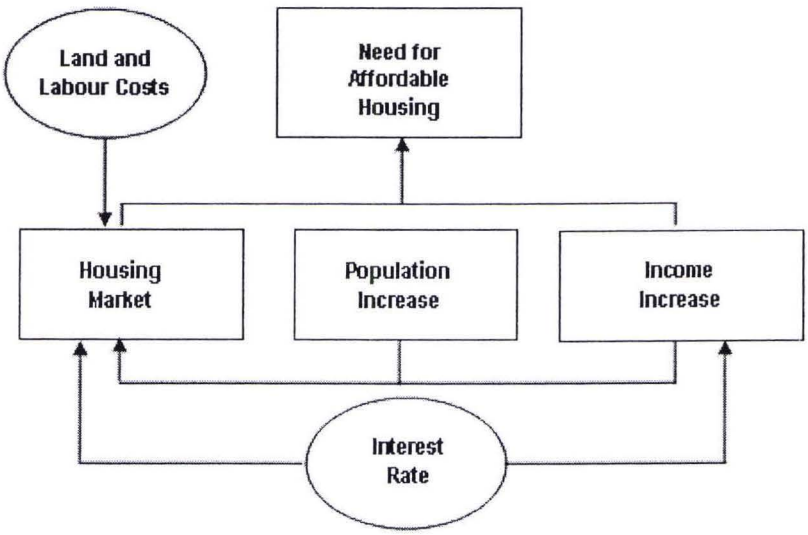

Fig 2.2 Factors Affecting Housing Affordability

Sharon, & William, 2007

From the above, Land and labour cost being the first item in housing development, have a significant impact on whether or not housing is affordable. This is based on the consideration that land has to purchased, and the labour force has to be paid. Easy access to land according to Philips (2003) promotes investment in housing industries. New housing developments will be aimed at capturing as much of the new demand as possible and given the cost of land and construction, housing will only be supplied above a certain minimum price level. It was reported by Felix (2003), Oladejo (2003) and Philips (2003) that the cost of land, labour and construction are the primary indicators that determine whether there is need for affordable housing. The rise in cost of land, labour and construction specifically affects the low-income earners (especially in the private open market) whose wages may have risen only marginally over time. Developers will either have to redevelop existing properties to reduce at least the cost of land or develop on new land in order to increase supply. If we assume that older or poorer quality housing is the first to be redeveloped, then low-income who are living in this housing stock and first time low-income buyers will be severely affected. This is because owners of older rental properties will have an incentive to sell to developers, yet there will be no new supply of affordable rental or owner occupied units for displaced tenants to move into.

Income substantially plays an important role as a primary determinant of whether a household is in need of affordable housing, but income also affects the price of housing in the market. According to Sharon and William (2007) housing is a normal 'good' and, as incomes increase, a counter demand for more housing is expected, which in turn increases the average price of housing. Increase in population on the other hand also plays a similar

role because housing is a necessity, so as the population increases, logically the demand for housing will increase. As demand for housing increases, housing prices will eventually rise, raising the need for affordable housing.

Interest rates equally are very important and have an effect on both the demand and supply of housing. If the interest rate declines, developers will find it cheaper to finance their business, making development more profitable. At the same time, a drop in the interest rate will increase the amount of money households can affordably spend on housing.

From the study of Sharon, & William (2007) discussed above, two (2) principal issues or subjects were observed to be attributed to housing affordability by this research namely:-

a. *Factors – Housing affordability*

b. *Affordable housing – Housing affordability*

a. *Factors – Housing affordability*

A Factor according to LONGMAN Dictionary is expressed as: *cause/influence:* - one of several things that influence or cause situation. From the various studies reviewed and discussed earlier on workforce housing and housing affordability, certain factors were outlined to have influence on affordability of housing, this implies that any study on housing affordability must take cognisance of this factors, thus factors are essentials in studies on housing affordability.

Analysing the factors outlined by Sharon, & William (2007), land and labour cost are attributes of housing situation in terms of cost, so also housing market and interest

rates, since all these factors determine the final cost of a housing unit. Population and income increase on the other hand relates to people whom are constituted as households, thus from this analysis, it can be inferred that the variables of housing affordability are; households and housing situation and; housing cost and household income are factors affecting housing affordability. Since housing affordability has been identified as a relationship between individuals constituted as households and housing situation, then the assessment of housing affordability is primarily in the relationship of two variables; household and housing situation.

b. *Affordable housing – Housing affordability*

The term "affordable housing" according to Stone (2006a) came into vogue in the 1980s as part of the retreat from public responsibility for the plight of the poor and as affordability challenges moved up the income distribution. Although it still lacks precise and consistent definition, the term has since achieved international stature, and it typically encompasses not only social housing and low-income housing, but also financially assisted housing for middle-income households that find it difficult to purchase houses in the private speculative market.

Most often affordability is expressed in terms of "affordable housing." However it should be understood that housing affordability is a 'subject dealing with a relationship' while 'affordable' is a characteristic of housing qualifying 'affordable housing' as a 'product or result' (a subject according to Longman dictionary is an issue or the thing we are talking about or considering in a conversation, discussion etc, while a product is a result of an action or a condition) therefore affordable housing can be said to be a result of

housing affordability. Stone (2006a) argued that affordability is not a characteristic of housing—it is a *relationship* between housing and people. He further explained that for some people, all housing is affordable, no matter how expensive it is; for others, no housing is affordable unless it is free. "Affordable" housing can have meaning (and utility) only if four essential questions are answered:

1. Affordable to whom?
2. on what standard of affordability?
3. for how long?
4. Meeting what physical standard?

The questions: affordable to whom, refers to individuals constituted as households in relation of their income; the standard of affordability is referring to the measure or yardstick that defines a particular housing as 'affordable' to a particular income group and size; for how long here refers to the validity or period of time over which a particular housing is considered as affordable; while meeting what physical standards is dealing with the quality of the housing in terms of physical structure.

The discussion above has shed light on the terminologies; housing affordability and affordable housing, although closely intertwined and fused together, but each word has its own unique meaning and focus in the subject of affordability in housing. The definition of affordable housing however, has highlighted some factors identified earlier i.e. household size and income, and additional factor namely; standards. From all the discussions, this study thus outlined the following variables of housing affordability with their associated surrounding factors.