

**IMPACT OF HOUSING FINANCE MARKET ON GROWTH OF SELECTED AFRICAN
ECONOMIES**

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JANUARY, 2017

TITLE PAGE

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ECONOMIES**

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**BEING A THESIS PRESENTED TO
THE DEPARTMENT OF BANKING AND FINANCE
FACULTY OF BUSINESS ADMINISTRATION
UNIVERSITY OF NIGERIA, NSUKKA ENUGU CAMPUS**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF
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SUPERVISOR: ASSOCIATE PROFESSOR CHUKE NWUDE

JANUARY, 2017

DECLARATION

I Alagba, Ogheneochuko Samuel, a postgraduate student in the department of Banking and Finance with registration Number PG/Ph.D./07/46581 do hereby declare that this research embodied in this thesis is my original work. It has not been submitted in part or full to this or other University, for the award of any Degree or Diploma.

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DEDICATION

I dedicate this thesis to God Almighty for His immense provisions, protection, Journey mercies and guidance throughout the period of this study. Also to my Wife Obatarheyere Mable and Children: Oghenekparowho, Igbunu, Uvietobore, Esegbuyota, and Omanuyovwi for their understanding and encouragement

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Alagba, Ogheneochuko Samuel

ABSTRACT

The motivation for this study arose from the need to place the African Continent on the part of sustainable economic development. Most Countries in Africa have been adjudged to be among the poorest nations, in sharp contrast with the abundant resources in the housing sector. The study adopted the ex-post facto research design. Annual longitudinal data from 1997 to 2014, a period of 18 years were collected from various data banks. The classical linear regression model was used in testing the seven hypotheses formulated from the sampled economies of Kenya, Nigeria, Burundi, Morocco and Namibia. Real Gross Domestic Product (RGDP) constituted the dependent variable, which is proxy for economic growth while outstanding mortgage loans by mortgage banks (MBOHL) and Commercial banks (CBOHL) constituted the independent variable. While interest lending rate (LINT), Total housing loan as a percentage of total loans (THLPTL) and total housing loans as a percentage of GDP (THLPGDP) were proxied for control variables. The findings revealed that housing finance is positive and statistically significant for some African nations, it is positive and none statistically significant for some other African nations. The study recommends a holistic approach to housing finance through Government policy direction, market based economy and introduction of Mortgage Backed Securities (MBS) in the capital markets across the African continent.

TABLE OF CONTENT

Title Page		i
Declaration		ii
Approval		iii
Dedication		iv
Acknowledgments		v
Abstract		vi
Table of Contents		vii
List of Tables		viii
List of Figures		ix

CHAPTER ONE: INTRODUCTION

1.1	Background of the Study		1
1.2	Statement of the Problem		4
1.3	Objectives of the Study		6
1.4	Research Questions		7
1.5	Hypotheses		7
1.6	Scope of the study		8
1.7	Significance of the Study		8
1.8	Limitation of the study		10
1.9	Operational Definition of terms		10
	References		12

CHAPTER TWO: REVIEW OF RELATED LITERATURE

2.1	Introduction		18
2.2	Conceptual Framework		18

2.2.1	Housing Finance	.	.	.	.	.	.	18
2.2.2	Housing Finance Market	.	.	.	.	.	.	18
2.3	Housing Finance Market in Africa	.	.	.	.	.	.	19
2.3.1	Housing Finance Market in Kenya	.	.	.	.	.	.	19
2.3.2	House Finance Market in Nigeria	.	.	.	.	.	.	19
2.3.3	Housing Finance Market in Namibia	.	.	.	.	.	.	19
2.4	Interest rate in Africa	.	.	.	.	.	.	19
2.5	Theoretical Review	.	.	.	.	.	.	20
2.5.1	Overview of Africa Housing Finance Market	.	.	.	.	.	.	20
2.5.2	Theories on Housing	.	.	.	.	.	.	22
2.5.3	Theories on Economic Growth	.	.	.	.	.	.	37
2.6	Empirical Review	.	.	.	.	.	.	51
2.6.1	Transnational Housing Finance Market and Economic Growth	.	.	.	.	.	.	51
2.6.2	Housing Finance Market and Economic Growth in Africa	.	.	.	.	.	.	60
2.7	Summary of Review Empirical Literature (The GAP Theses)	.	.	.	.	.	.	65
	References	.	.	.	.	.	.	69

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Introduction	.	.	.	.	.	.	78
3.2	Research Design	.	.	.	.	.	.	78
3.3	Source and Nature of Data	.	.	.	.	.	.	80
3.4	Population, Sample Size and Areas of the Study	.	.	.	.	.	.	80
3.5	Model Specification	.	.	.	.	.	.	80
3.6	Definition of Variables in the Model	.	.	.	.	.	.	82
3.7	Technique of Data Analysis	.	.	.	.	.	.	83
3.7.1	Diagnostic and Standard Tests	.	.	.	.	.	.	83

3.7.2	Test for Stationary	83
3.7.3	Regression Analysis	84
3.7.4	A Test of Significance (F & T Statistics)	85
3.7.5	B Correlation Coefficient	85
3.7.6	C Co-Efficient of Determination	85
3.7.7	D Test for Autocorrelation	86
	References	87

CHAPTER FOUR: PRESENTATION AND ANALYSIS OF DATA

4.1	Introduction	89
4.2	Data presentation and Interpretation	89
4.3	Test of Hypothesis	98
	References	123

CHAPTER FIVE: SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATIONS

5.1	Summary of Findings	125
5.2	Conclusion	125
5.3	Recommendations	126
5.4	Contribution to Knowledge	127
5.5	Recommendations for Further Studies	127
	Bibliography	128
	Appendix 1-5 Unit Root Test Results for Kenya	144
	Appendix 6-10 Unit Root Test Results for Nigeria	147
	Appendix 6-15 Unit Root Test Results for Burundi	150
	Appendix 6-20 Unit Root Test Results for Morocco	155
	Appendix 6-25 Unit Root Test Results for Namibia	157

LIST OF TABLES

Table 2.1 Summary of some Previous Empirical studies on Impact of Housing Finance on Economic Growth	65
Table 4.1: Kenya- Housing Loans and other Variables under Study (billions of Shillings)	90
Table 4.2: Nigeria- Housing loans and other Variables under Study (N billions) 1985 ñ 2014	91
Table 4.3: Burundi- housing loans and other Variables under Study (US \$ millions) 1985 ñ 2014	93
Table 4.4: Morocco- housing loans and other Variables under Study (US \$ millions) 1985 ñ 2014	95
Table 4.5: Namibia- Housing loans and other Variables under Study (US \$ millions) 1985 ñ 2014	97
Table 4.6 Kenya, Descriptive Statistics	98
Table 4.7 Stationarity tests of the key Variables	100
Table 4.8 Regression Results test of model one and Two	101
Table 4.9 Nigeria, Descriptive Statistics	102
Table 4.10 Stationarity Tests of the key Variables	103
Table 4.11 Regression Results test of model Three	104
Table 4.12 Burundi, Descriptive Statistics	105
Table 4.13 Stationarity tests of the key Variables	107
Table 4.14 Regression Results test of Model five	107
Table 4.15 Morocco, Descriptive Statistics	108
Table 4.16 Stationarity tests of the key Variables	109
Table 4.17 Regression Results test of Model six	110
Table 4.18 Namibia, Descriptive Statistics	111
Table 4.19 Stationarity Tests of the key Variables	112
Table 4.20 Regression Results test of Model Seven	113
Table 4.21 Summary of results	114

LIST OF FIGURES

Fig 1: Kenya- Housing Loans and other Variables under Study (Billions of Shillings) 1985-2014	99
Fig 2: Nigeria- Housing Loans and other Variables under Study (Billions of Naira) 1985-2014	103
Fig 3: Burundi- Housing Loans and other Variables under Study (Millions of US\$) 1985-2014	106
Fig 4: Morocco- Housing Loans and other Variables under Study (Millions of US\$) 1985-2014	109
Fig 5: Namibia- Housing Loans and other Variables under Study (Millions of US\$) 1985-2014	112

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Researchers in the fields of Finance, Economics and Urban Development have revealed that the term housing goes beyond the provisions of a place of residence, it includes the available social services such as pipe-borne water, electricity and sanitary condition of the environment among others. Hence decent housing is said to have a positive effect on the lives of the residence in terms of being more productive, improved health, self-confidence and dignified personality. Conversely, a robust housing finance market is a catalyst for economic growth through the creation of employment in other sectors of the economy, assisting household in asset acquisition and improvement in living condition of societies (Bank of Ghana, 2007; Rahman, 2009; Doling, Vandenberg & Tolentino, 2013). Likewise Hassler (2011), affirm that real estate investment is a key contributor to economic growth, household welfare and urban development. Construction is one of the sectors with the most impact on the economy. It deepens and makes the financial system more efficient by helping to mobilize savings, expand access and reduce informal sources of finance.

Conversely, Ade (1983) posits that financing of real estate, which includes our homes, shopping centres, office buildings, firms and factories, is one of the major responsibilities of our financial system. Housing is considered as a basic necessity for man. According to Hanif and Hajazi (2010), Housing is a basic need and the major problem is the shortage of housing units, especially in less developed economies, Pakistan inclusive. This view was supported by Coskun (2011), he argued that the housing problem is an unresolved issue in Turkey. Housing was made a constitutional issue due to the importance attached to housing by the Turkish government. The Turkish Republic Constitution of 1982, article 57, specifically states that the government will take steps to meet the demand for housing delivery within the context of a policy which will consider the peculiarities of towns and environmental conditions and supports community housing projects. The place of housing in the economic development of nations is so important that government all over the world, including Nigeria makes provision for decent and affordable housing for her citizens. Onuigbo (1999), opined that housing is a very important facility in the scheme of economic production. All the above authors argued that a well housed workforce enjoy good health, physical comfort and composure of mind, which impact positively on economic production. Similarly, Olaniran

(2003); argued that housing transcends mere provision of shelter. Rather it includes the provision of utilities and community services which enhances human dignity, creates conducive social climate, facilitate orderly development of society and improve the health and sanitary conditions of the people. From the above context three (3) conclusions could be drawn; first is that housing is a fundamental human need. Secondly, that those who live in decent houses are more likely to make positive contributions to the economic growth and development of society. Thirdly, that the term housing includes the environment and social amenities available for the consumption of its occupants. Obadian (2007); puts it thus: 'the demand created by housing needs of modern man transcend the provision of mere shelter as it embraces all other social services and utilities that enhances the dignity of a man living a decent life'.

Olayiwola, Adeleye & Ogunshakin (2005), posits that housing is one of the three basic needs of mankind and it is the most important for the physical survival of man after the provision of food. Adequate housing contributes to the attainment of physical and moral health of a nation and stimulates the social stability, the work efficiency and the development of the individuals.

Since housing enhances production, it then means it is a tool for rapid economic growth of a nation. The housing sector has a multiplier effect. In most developed economies, the housing sector is seen as an important sector for stimulating economic growth (Okonjo-Iweala 2014; Isa, Jimoh & Achuuenu, 2013; NHBI 2012). Also Igbinoba (2011) asserted that the housing sector has the ability to stimulate economic growth and development in a depressed or stagnant economy and raising the standard of living of the people. It could be argued that there is a strong correlation between housing contributions to a nation's Gross Domestic Product (GDP) and the people's ability to own their own houses.

Similarly, it has been argued that Mortgage lending is the primary mechanism used in many countries to finance private ownership of residential property. It is normal for home purchase to be funded by mortgage loan. Few individuals have enough savings or liquid funds to enable them to purchase property outright. In countries where the demand for home ownership is highest, strong domestic markets have developed (Andrew, 2010; Haurin & Munasib, 2006; Wilcox, 2005). Giving special attention to the housing finance market in Africa is important for the following reasons: It will enable the low and medium income earners who cannot ordinarily build or buy a house out of their small earning to own a house.

These workers will in turn pay property rent to the government, thereby expanding the government revenue base. This point is crucial when viewed against the background that 70 percent of all tax revenues raised by local municipalities in the United States, comes from property taxes (Igbino, 2011). Also a well-developed housing finance market will provide paid employment and stimulate economic development in the other sectors of the economy. It has been argued that the US real estate industry is a major contributor to the national economy. In 2001 it provided job for 1.7 million Americans and it generated hundreds of billions of dollars every year as an economic output. (Igbino, 2011). Aside from enabling the low income group to own a house, tax revenue to governments and generation of employment, the desire to build or purchase a house is a primary motivation for the generation of household savings in the financial system.

Housing finance market is a segment of the capital market. It has been argued that housing finance refers to the activities of both private and public sectors in providing financial resources with or without financial agents and intermediaries for the purchase, construction, improvement or renovation of a housing unit including the immediate infrastructure (Onuigbo, 1999). Also Boleat (1985), observed that the purpose of a housing finance system is to provide the funds which home-buyers need to purchase their homes. However, there may be differences and complexities from country to country due to government intervention, but the essential feature of any system, that is, the ability to channel the funds of investors to those purchasing their homes, must remain.

There is a strong correlation between the housing finance market and development as evidently demonstrated in the US economy before and after the economic meltdown of 2008. It is as a result of the positive relationship between the housing sector and economic development that the US economy experienced a fast growth between 2001 and 2007, a period referred to as housing bubble. However, with a crash in the housing sector which occurred between 2008 and 2010 as a result of the subprime lending crises, (bubble burst) the US economy also declined within the period.

The purpose of this study is to ascertain the effect of the housing finance market on the economy of African states. Activities in housing finance market were examined in Kenya, Nigeria, Burundi, Morocco and Namibia due to the relative availability of data in these markets. There is dearth of data in housing finance in most African countries, consequent upon the under development of the market in the continent. Similarly, it has been noted:

when it comes to African economies, and that of many other developing countries, I think this conventional wisdom on the importance of the housing sector seem to be forgotten. The housing sector is almost a big elephant in the room which seems to have escaped the attention of policy- makers, multilateral institutions and the private sector. At present, housing finance remains under developed in most emerging markets. The lack of financial services in developing countries has a significant negative impact on the efficiency of urban investments, of which housing constitutes probably form about 60 percent if the experience of advanced economies in any guide (Okonjo-Iweala, 2014; Renand, 2004).

Among the countries of North Africa region, Morocco has the most advanced housing finance market while the Egyptian mortgage market is the least developed. Egypt housing finance market is relatively young, although the country has a long history of provision for housing. In the 60s and 70s the policy was provision of mass housing by the state. The policy was later considered to be inadequate as the burden of provision of houses especially for the poor was becoming unbearable for government. The government has since charted a new course, the provision of enabling environment for private sector to thrive. Hassan (2014) posits that with the establishment of Egyptian Mortgage Refinance Company (EMRC) in 2006 with the objective of providing long-term finance to the mortgage finance companies, the housing finance market has witness a tremendous growth. EMRC issues bonds duly collateralized by real estate loan portfolio, which help enhance the bond market and provide long-term finance resources.

On the contrary, growth in the Nigerian housing finance market has been slow. It accounts for only 4 percent of Gross Domestic Product (GDP) at its Peak. At a time it was as low as 1 percent (Kolawole, 2015). According to Kolawole (2015) the sector has in recent time out grown the GDP at 8.7 percent. On the other hand Namibia has a strong and efficient finance market. It is estimated that about 52.8 percent of the total credit in 2012 were mortgage loans. Comparatively, the Namibian financial sector is second only to South Africa within the African continent. Thus South African has a history of sound financial system. The government introduced several measures to induce financial institutions to invest in the housing sector. Part of the measure was the establishment of the National Urban Reconstruction and Housing Agency (NURCHA). It was established to provide guarantees to both bank and non-bank lenders as a mean of lowering the risk of operating in this segment of the market (Moss 2009).

1.2 STATEMENT OF THE PROBLEM

The African continent has been adjudged to be one of the poorest region in the world. This is in sharp contrast with the huge abundant resources in the housing and housing finance sectors waiting to be tapped. Several studies have been carried out on housing finance market. However none seem to have addressed collectively the problem of the impact of housing finance market on the economies of Kenya, Nigeria, Burundi, Morocco and Namibia. It has been argued that housing and housing finance has the potential of re-positioning the economy of nations. On the other hand, international experience in high income economies shows that a well-functioning mortgage market will provide very larger external benefits to the national economy. Efficient real estate development, construction sector employment, easy labour mobility, capital market development, more efficient resources allocation, and lower macroeconomic volatility (Renaud 2004).

This study is shaped around Oyalowo (2012). The research conducted by Oyalowo in (2012) examined the constraints limiting lending institutions' participation in housing finance supply in the West Africa region. It also examines how governments across West Africa can tackle these constraints. It was based on regression analysis of secondary data related to factors necessary for lending institutions' participation in formal housing finance supply. The ratio of the private credit to GDP of West African countries between 2008 and 2010 is regressed against the independent variables inflation rate, procedures to register property, time to register property, cost to register property, strength of legal right index and depth of credit information system. Similarly, Chen et al (2006) focuses on economic development and housing affordability in China. It argued that the importance of housing finance industry in the Shanghai economy increased significantly since 2000. Its share in Shanghai GDP was 5.5% in 2000 but has risen to 8.4% in 2004, it is now the third largest industry sector in Shanghai and ranks behind only the IT and finance industry sector. Other studies asserted that the housing sector is an important segment in any economy. As such housing policy must be seen as one of managing an important economy sector, with crucial links to overall economic performance, rather than, as is a common view, simply producing dwellings as a component of the social welfare system. These links, through the real, fiscal, and financial circuits of the economy are becoming increasingly well understood. As these become more transparent, the stakes of good housing policy become more and more evident. Furthermore the housing

sector is said to have a multiplier effects on the economies of nations. It is an important tool for stimulating economic growth (Mayo 1991, Okonjo-Iweala 2014 Akinwunmi et al 2008).

Given the role of housing finance in economic growth it has been observed that the main factors determining the growth of mortgage lending activities related to the development of the economy of Latvia are: growth of the GDP, the development of the construction sector, and increasing transactions in the real estate sector (Solks, 2010). While the above studies emphasized the role of housing finance in economic growth, Tomlinson (2007), looked at the study from a different dimension. He argued that for a long time, studies relating to housing tended not to focus on housing finance per se, but rather emphasised topics such as urbanisation, unplanned settlement upgrading, the lack of residential land for formal housing and so forth. In such context, housing finance has primarily been discussed as one of a number of constraints, rather than as the focus of the research. Also a growing body of research has been highlighting its importance for social and economic development, causing housing finance to become a distinct field of knowledge and endeavour. It has slowly emerged from the grey zone between urban development and financial sector development, to assert its claim as distinct field in its own right (Porteous, 2006).

From the body of literature reviewed, it is evident that there is a gap in knowledge concerning housing finance market in Africa. The gap reveals that there is no known impact study of housing finance on African economies. Also there is no known comparative study of housing finance market on the economy of Egypt, Nigeria and South Africa. It is these gaps that the study seeks to fill.

1.3 OBJECTIVES OF THE STUDY

The major objective of the study is to find the impact of Housing finance market on growth of selected African Economies while the specific objectives are:

1. To analyse the impact of the contributions to housing finance by Mortgage banks on economic growth of Kenya.
2. To examine the impact of the contributions to housing finance by commercial banks on the economic growth of Kenya
3. To determine the impact of the contributions to housing finance by Mortgage banks on the economic growth of Nigeria.

4. To ascertain the impact of the contributions to housing finance by commercial banks on the economic growth of Nigeria.
5. To evaluate the impact of the aggregate housing finance on economic growth of Burundi.
6. To appraise the impact of the aggregate housing finance on economic growth of Morocco
7. To determine the impact of the aggregate housing finance on economic growth of Namibia.

1.4 RESEARCH QUESTIONS

The following research questions were postulate in order to have a clearer understanding of the subject matter.

- a. To what extent has the contributions to housing finance by Mortgage banks impacted on the economic growth of Kenya?
- b. To what extent has contribution to housing finance by commercial banks impact on the economic growth of Kenya?
- c. How far has the contributions to housing finance by Mortgage banks impacted on the economic growth of Nigeria?
- d. How far has the contributions to housing finance by commercial banks impacted on the economic growth of Nigeria.
- e. To what extent has the aggregate housing finance impacted on the economic growth of Burundi?
- f. To what extent has the aggregate housing finance impacted on the economic growth of Morocco?
- g. To what extent has the aggregate housing finance impacted on the economic growth of Namibia?

1.5 HYPOTHESES

The following null hypotheses will be tested in these study:

- Ho₁ The contributions of housing finance by Mortgage banks does not have positive and significant impact on economic growth of Kenya.
- Ho₂ The contributions of housing finance by commercial banks does not have positive and significant impact on economic growth of Kenya.

- Ho₃ The contributions of housing finance by Mortgage banks do not have positive and significant impact on economic growth of Nigeria.
- Ho₄ The contributions of housing finance by commercial banks do not have positive and significant impact on economic growth of Nigeria.
- Ho₅ The aggregate housing finance does not have positive and significant impact on economic growth of Burundi
- Ho₆ The aggregate housing finance does not have positive and significant impact on economic growth of Morocco.
- Ho₇ The aggregate housing finance does not have positive and significant impact on economic growth of Namibia

1.6 SCOPE OF THE STUDY

The housing finance market is a part of the wider mortgage finance market, concerned principally with the provision of loans for the purchase or development of real asset. Activities in the real estate market range from the provision of land and the necessary documentation associated with such purchases, to the acquisition of an already completed building or erecting a new building on a parcel of land. There are different types of building at different cost. The choice of building to be constructed at any point in time depends on two factors. These are the intended use of the building and the financial position of the owner of the building.

Housing is synonymous with status symbol. The type of a house one lives in is a reflection of his social standing in society. Discussion on housing finance could be approached from two perspectives, access to mortgage finance and effect of mortgage finance on the economy. In this study, the focus is on the effect of mortgage finance on the economy. Period under investigation is thirty (30) years 1985 to 2014

1.7 SIGNIFICANCE OF THE STUDY

This study will be most significant to the following groups. These groups are:

1. Government:-

This study will be of immense benefit to government at the federal, state and local government level. It will assist government in formulating and implementing appropriate developmental policies. It has been argued that housing finance has a multiplied effect to the economy because of its backward and forward integration.

Conversely, when government formulate appropriate policies that will create an enabling environment for the growth of the housing sector and housing finance market, it will automatically stimulate growth in the economy. Growth in the housing sector and housing finance market has the potential of affecting the economy in positive ways. First is creation of mass jobs for artisans, engineers and other skilled and unskilled labour. Secondly, is the eradication of poverty when majority of the people are gainfully employed and there is a free flow of economic activities, poverty will be reduced to its barest minimum. Thirdly, it will lead to increase in financial intermediation. More people will demand for mortgage loan, thereby stimulating economic growth.

The significant of the study on housing finance market is derived from the importance of housing as a tool for economic development and the attention paid to housing delivery by various governments all over the world. Housing has been said to rank next to food among the basic necessities of man. Consequently there is the need to adequately house the inhabitants of a nation, especially when viewed against the background that a well housed workforce contribute maximally to the production of goods and services in any economy.

In effect adequate housing of the African worker is a necessity. While the provision of affordable housing for the low and medium workers in the public service are capable of addressing the following issues in Africa:

- Attainment of the sense of fulfilment among the low and middle level public servants.
- Elimination/reduction of corruption in the public service.
- Increased productivity of the public servant, thereby leading to increased national output.

2 Investors

Both local and foreign investors will benefit maximally from the study. It will expose them to the opportunities available in the housing finance market.

It has been argued that the real estate sector contributed greatly to the transformation of the American economy. In like manner a well-developed housing finance market is capable of transforming the African economies while at the same time creating mass employment for the teeming population of African. Warnock and Warnock (2008) observed that while housing finance is a vital component of a well-functioning housing system, to date there has not been a systematic analysis of the depth of housing finance across a broad set of countries. In fact, as far as we know, no formal cross-country study of the size of the housing finance market exists. Existing

international housing finance studies tend to be descriptive and highly informative, but lack any formal empirical analysis and often focus on one or more country case studies.

3. Academia

This study is intended to contribute to existing theoretical and empirical literatures in housing finance discipline. Specifically, its aim to determine the impact of housing finance market on growth of emerging economies like Egypt, Nigeria and South Africa. There is dearth of literature on housing and housing finance market in Africa despite the importance of this field of study. Conversely, this study will stimulate interest on further research, teaching and learning on how a robust housing finance market could be used to accelerate growth of the African economies and other economies of emerging housing finance markets.

4. Financial Institutions

This research will maximally be beneficial to financial institutions, especially insurance companies and pension funds administrators. The housing finance market will serve as an investment hub for the excess liquidity of these institutions. Also it will enable the Primary Mortgage Banks to introduce mortgage backed securities which will be traded in the stock exchange market.

5. General Public

The result of this study, is believed will be of immense benefit to the general public. Housing is a basic necessity that touches on every life. It is the desire of every working adult to own a house to which he will retire to one day. Housing is a capital project and a study on housing finance market is one of the surest way to enlighten members of the public on how to access finance to build their own houses.

1.8 LIMITATION OF THE STUDY

Like most field of studies, housing finance as a new field of study in finance is associated with some limitations. The main limitations of this study are:

Size of the Market: The mortgage market and the housing finance market are interrelated for there to be a robust housing finance market there have to be sound mortgage market that supply fund. In most African Countries, it is either the market is non-existed or under developed.

Materials: As a new field of study, there are not enough indigenous materials. The researcher has to rely mostly on materials from developed countries such as USA and United Kingdom. Materials were also sourced from some developing countries. Among the countries are China, India, Egypt, South Africa, Ghana and Nigeria.

1.9 OPERATIONAL DEFINITION OF TERMS

Mortgage Loan: money obtained from financial institution, secured by real assets

Housing Finance Market. A specialized market for funds for building construction, purchase of land and renovation of house is traded. It is a market restricted to real estate only; funds for the construction of different types of houses, such as housing estate, shopping complexes and residential houses are obtained in this market.

Housing Finance. It refers to the activities of both private and public sectors in providing financial resources with or without financial agents and intermediaries for the purchase, construction, improvement or renovation of a housing unit including the immediate infrastructure (Onuigbo, 1999).

Housing: The provision of shelter which includes the provision of utilities and community services which enhances human dignity, creates a conducive social climate, facilitates orderly development of society and improves the health and sanitary conditions of the people.

Mortgage backed security (MBS) it is a type of asset-backed security that is secured by a mortgage or collection of mortgages. The mortgages are sold to a group of individuals (a government agency or investment bank) that securitizes, or packages, the loans together into a security that investors can buy.

Emerging market: Is a market that has some characteristics of a developed market, but does not meet the standards to be a developed market.

Economic growth: An increase in the capacity of an economy to produce goods and services, compared from one period of time to another. It could be measured in nominal terms, which include inflation or in real terms, which are adjusted for inflation.

Economy: The wealth and resources of a country or region, especially in terms of the production and consumption of goods and services.

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CHAPTER TWO REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

In this chapter the researcher reviewed literature related to the topic under study. The review was carried out under three sub-headings of conceptual framework, theoretical framework and empirical study. Works of academic scholars were classified, synthesised and analysed, with appropriate opinion expressed. Also the chapter contains summary of empirical literature reviewed and the gaps in knowledge identified in the literatures which this study intends to fill were stated.

2.2 CONCEPTUAL FRAMEWORK

2.2.1 Housing Finance

Housing Finance is what allows for the production and consumption of housing. It refers to the money we use to build and maintain the nation's housing stock. It also refers to the money we need to pay for it, in the form of rents, mortgage loans and repayments (King, 2009). It could be argued that housing occupies a strategic position in a nation's economic growth. Similarly, the term mortgage could be used interchangeably with housing finance.

2.2.2 Housing Finance Market

Badev, Beck, Vado & Walley (2014), asserted that there is a large variation in depth and penetration of mortgage market (housing finance market) development across countries. They argued that in high-income economies mortgage is widely available and occasionally used for consumer financing of housing while in low and lower-middle income countries mortgage financing accounts for only a few transactions. For instance, total mortgage debt outstanding in the Netherlands is equivalent to 83 percent of GDP, whereas it amounts to less than 1 percent of GDP across many low and middle income countries in Asia and Africa. The low rate of usage of mortgage finance in these countries is an indication of underdeveloped housing finance market. Furthermore, housing requires financing since house prices are often a multiple of annual income and mortgage finance systems in many developing countries currently do not satisfy the housing needs of these societies.

Similarly, the authors affirmed that there is a long and extensive literature on housing finance across several developed economies, however cross-country comparisons have been impeded by a dearth of data. It could be argued that if cross-country comparison study on housing

finance is impeded in developed countries by dearth of data, then the problem is more acute in developing countries of Africa where data bank is almost non- existence.

2.3 HOUSING FINANCE MARKETS IN AFRICA

According to CAHF (2012), housing finance markets are developing in scale and diversity across Africa, creating opportunities for investors and practitioners, and promoting a new category for economic growth. One of the factors responsible for the growth of the market is growth in population and rural ñ urban migration (Ajanlekoko 2001). Consequently, the growth in population in many cities in African countries has created demand for new housing. Hence African housing finance markets is said to be dynamic and growing. However the rate of growth differ among countries across the continent.

2.3.1 Housing Finance Market in Kenya

The mortgage market is relatively new in Kenya. By the end of 2011, she has a total of 29,631 mortgages, contributing about 1 percent to the nation's GDP. There are only two mortgage financial institutions in Kenya (CAHF, 2013, Nasr, 2006).

2.3.2 Housing Finance Market in Nigeria

Nigerian housing finance market started in 1956, with the establishment of the Nigeria Building Society (NBS). It was NBS that eventually translate to Federal Mortgage bank in 1977. Some of the constrains to the mortgage market is lack of access to long term finance, lack of qualified personnel in mortgage banking among others. At present it is estimated that the mortgage sector contribute about 3 percent to the nation GDP. This is far below the international standard.

2.3.3 Housing Finance Market in Namibia

Namibiahousing finance market has one of the most developed housing finance market in Sub-Sahara Africa second only to South Africa. The mortgage sector contribute about 24.5 percent on the average to the GDP.

2.4 INTEREST RATE IN AFRICA

Generally, interest rate is said to be high across the countries of Africa, due to the under-development of the financial institutions. The countries of Kenya, Nigeria, Burundi, Morocco and Namibia are not an exception to the high interest rate phenomena. There is a negative

correlation between high interest rate and mortgage financing. The higher the interest rate charge in the market, the lower the demand for mortgage loans.

2.5 THEORETICAL REVIEW

2.5.1 Overview of Africa Housing Finance Market

In the past fifteen years discussion on housing finance has attracted much attention, due partly to its impact on economic growth and partly to the global financial crises. Given the importance of the housing sector, it has been argued that the financial crises was occasioned by excessive subprime credit lending in the U.S economy (IMF 2011). By definition, housing finance market is a formal arrangement by which participants obtain the needed finance for the production and consumption of housing. It refers to the money used to build and maintain the nation's housing stock. Also, it refers to where the money needed to pay products in the form of rents, mortgage loans and repayments. (King, 2009, Nagar, 2004; Bank of Ghana, 2007).

Similarly, FGN (2012) posit that while housing finance market is the formal institutional arrangement through which money is obtained for the construction of housing unit, renovation or purchase of land, housing finance on the other hand refers to the monies required for the development of housing units, provision of housing infrastructure and purchase or acquisition of housing units. Furthermore housing finance is a critical factor in the housing delivery framework. It is the engine that drives the housing sector. The policy thrust argues that accessibility to large pools of long term funds at cheap rates is imperative for mass housing development but it is impossible to mobilize such funds in the absence of a well-developed and efficient housing finance market. The market must address the issues of affordability for households, accessibility and viability for financial institutions and developers. In addition, there must be enforceable property rights, effective registration and titling system, adequate foreclosure law, diversified funding including mortgage securities, credit information system, strong prudential regulations, level playing field among lenders, and sound risk management practices. Others are accessible and reliable housing data, existence of professional real estate intermediaries, urban development regulations adapted to economic realities and access to titled land for developers.

Government must show commitment to meeting these criteria in order to attract domestic and international resources for the expansion of the sector. This is the only way to build the

confidence of investors in the system and attract the huge sums lying idle under the Pension funds, foreign direct investment and remittances from the Diaspora into the housing sector.

Hoskins Jones & Weiss (2013), asserted that a loan that uses real estate as collateral is typically referred to as a mortgage. If the borrower does not repay the mortgage as promised, the lender can reposes the property through a process known as foreclosure. He used the term mortgage market to refer to the arrangement through which money is obtained to finance real estate. Hence in this study the terms housing finance market and mortgage market mean the same thing.

Giddings (2007) observed that investment in housing is capable of transforming the African economics while at the same time placing the economies on the path of sustainable development. He pointed out as follows:

Housing has been a driver of economic growth throughout the world and there is not a reason why it cannot do the same in African.

Furthermore he argues that in many African cities towns, less than 10% of the population lives in formal housing. By formal housing, it means modern building with good facilities such as pipe bore water, electricity and decent environment that is conducive for the dignity of man. He illustrated those living in slums in African cities as follows:

Zambia	74% of Urban dwellers
Nigeria	80% „ „ „
Sudan	85.7% „ „ „
Tanzania	92.1% „ „ „
Madagascar	92.9% „ „ „
Ethiopia	99.4% „ „ „

It is argued that African slum lack adequate shelter, portable water and sanitation systems, electricity and affordable public transportation.

South Africa appear to be the most serious country in African to have taken steps to addressing the problem of slum since the fall of apartheid. From 1994 ñ 2004, more than 1.6m housing and another 500,000 housing unit was constructed and allocated to members of the public. In spite of these efforts Tomlinson (2006) asserted that the number of people living in shacks in informal settlements actually increased from 1.45 million in 1996 to 1.84 million in 2001,an increase of 21%. This further underscore the need for a robust housing finance market in African.

Giddings (2007) further argues that there is a mass rural/urban migration in African. Hence the need to properly house the urban dweller. He puts it as follows:

Well-functioning urban areas are critical to African's economic growth. Most African countries like the rest of the world, show a positive correlation between levels of urbanization and economic growth. Urbanization is, and of itself, a wealth creating process. Economic growth in Africa during the past 15 years has been driven overwhelmingly by the industrial and service sectors, which are mainly urban based.

He observed that housing is a driver of economic growth in developed economies and can be a significant component of developing countries' economics. Similarly, he observed that a World Bank study has shown that investment in housing in developing countries represented between 15 and 30% of fixed capital formation. As economies develop, investment in housing becomes an even greater component of GDP.

2.5.2 Theories on Housing

It has been argued that theory plays an essential role in research. Functions of theory may include describing, explaining, predicting, advancing knowledge, providing order, and developing and/or guiding research (Bubolz, 1991). Studies has shown that 73% of housing research articles published in *Housing and Society*, *Environment and Behaviour*, and *Family and consumer Sciences Research Journal* mentioned a theoretical basis. However, only few of the articles identified direct testing of a theory or proposed theory as an outcome of the study (Steggell, Binder, Davidson, Vega, Hutton & Rodecap, 2003). According to Meleis, (1997), Nagasawa, Kaiser, & Hutton, (1989), the use of theory shows the maturity of a discipline, abstract theoretical development is essential to advance the discipline.

Conversely, there appear to be a general agreement that theory is essential to systematically organize and synthesize information, discover relationship among variables, and guide the discovery (Creswell, 2003; Toulaitos & Compton, 1988). Similarly, Mitchell & Jolley (1992) opined that without theory-based research, a discipline chaotically moves in all directions with lack of purpose. On the other hand Hannon & Burns (2000), observed that while a theory allows the researcher to explain and predict behaviour, it also dictates which and whose behaviours are worthy of study and which should be excluded from study. In like manner Steggell, Yamamoto, Bryant & Fidzan; (2006), explained, deductive theory is often used in quantitative studies. The researcher advances a theory, collects data to test it, and reflects on the confirmation or disconfirmation of the theory by the results.

As regard the use of theory in housing study, there are two different school of thought. The first school is of the view that housing is not an academic discipline as such cannot have its own theory. Rather researchers in housing should go back to their parent discipline and use those theories in social sciences to explain phenomena in housing study. One of those who hold this view is Allen & Gurney (1997), who argue that housing is not an academic discipline in its own right in that it lacks its own concepts and method logical apparatus.

On the contrary, the second school of thought posits, whether the above argument is correct or not, it can be said to be the established view, if only because there has seldom, if ever been any attempts to create housing theory. Furthermore, they argued, while there are now many housing researchers who engage with theory and have used existing social theories fruitfully and successfully, this has not led these researchers to attempt theory creation themselves (King, 2010).

Some of the members of this second school of thought are Kemeny (1992) and King (2010). In his study on the nature of housing research in relation to social theory, Kemeny (1992) argued that housing studies was confined to a narrow empiricism and, as a result, it has been left behind by advances in social sciences over the last 20 ñ 30 years. His point was that housing researchers need to engage with concepts and theories that were quite common in discipline such as sociology politics and economics, but which had apparently by passed academic housing studies. While King (2010) observed that the scope of housing policy is too narrow as a field of study. Hence he introduce the concept of dwelling, by which the field of housing studies is widened to consider the ordinary use of housing, and this opens up a number of possibilities for theory creation.

Having stated the importance of theory in research, the following theories will be examined specifically to determine their impact on housing and housing finance market in Africa.

Convergence Theory

By definition convergence theory has its roots in the functionalist perspective, which assumes that societies have certain requirements that must be met if they are to survive and operate effectively. Convergence theory states that as societies become increasingly industrialized, they begin to resemble other industrialized societies. That is, they converge towards other forms of social organisation.

According to Venter (2010), the convergence theory is based on universal principles which assume that countries that display demographic and economic similarities can employ similar housing systems. Differences between countries are explained as exceptions or variations to the general rule (Kemeny and Lowe, 1998:162-163). Convergence theory plays a central role in housing studies and are especially connected with studies of functioning and evolution around the concept of the welfare state (Kemeny and Lowe, 1988; Kleinman, 2002). Convergence theory in the 1950s and 1960s in Europe focused on the development of welfare state and the emphasis was on state intervention. However, since the 1970s the majority of European and other developed countries around the world are converging or evolving away from state intervention principles towards private market-based economics. The converging tendency for housing entailed a reduction in housing subsidies, reforms in public housing and rental housing being superseded by ideologies of owner occupation.

Similarly, Fuente (2000), posits, we can provisionally interpret convergence theory as a shorthand for the possible existence of a tendency towards the reduction over time of income disparities across countries or regions. Hence, we will say that there is convergence in a given example when the poorer economies in it tend to grow faster than their richer neighbours, thereby reducing the income differential between them. When we observe the opposite pattern (i.e. when the rich grow faster and increase their lead) we will say that there is divergence in the sample.

Economic theory does not provide unambiguous predictions about the convergence or divergence of per capita income levels across countries or regions. It does, however, identify a series of factors or mechanisms that are capable in principle of generating either convergence or divergence. Theoretical models based on different assumptions about the existence or relative importance of such mechanisms can generate very different predictions about the evolution of income disparities across territories.

At some risk of oversimplifying, we can classify growth models into two families according to their convergence predictions. According to those in the first group, being poor is, to some extent, an advantage. In these models the technology is such that, other things being equal, poor countries grow faster than rich ones. This does not necessarily imply the eventual elimination of inequality (other things may not be equal). But it does mean that the distribution of relative income per capita across territories will tend to stabilize in the long run, provided some key structural characteristics of the different economies remain

unchanged over time. In the second set of models, in contrast, rich countries grow faster and inequality increase without any bound.

The source of these contrasting predictions must be sought in very basic assumptions about the properties of the production technology at a given point in time and about the dynamics of technological progress. A first necessary condition for convergence is the existence of decreasing returns to scale in capital (or, more generally, in the various types of capital considered in the model). This assumption means that output grows less than proportionally with the stock of capital. This implies that the marginal productivity of this factor will decrease with its accumulation, reducing both the incentive to save and the contribution to growth of a given volume of investment and creating a tendency for growth to slow down over time. The same mechanism generates a convergence prediction in the cross-section: poor countries (in which capital is scarcer) will grow faster than rich ones because they have a greater incentive to save and enjoy faster growth with the same rate of investment. This result will be reinforced by open-economy considerations, as the flows of mobile factors, together with international trade, will contribute to the equalization of factor prices and domestic products per worker. Under the opposite assumption (of increasing returns in capital) the proceeding neoclassical logic is inverted and we obtain a divergence prediction. In this case, the return on investment increases with the stock of capital per worker, favouring rich countries that tend to grow faster than poor ones, thereby increasing inequality further.

The second factor to consider in relation with the convergence or divergence of income per capital or productivity has to do with the determinants of technological progress. If countries differ in the intensity of their efforts to generate or adopt new technologies, their long-term growth rates will be different. One possible objection is that the persistence of such differences is not plausible. For instance, it may be argued that the return on technological capital should decrease with its accumulation, just as we would expect to find for other types of capital. In this case, large differences across countries in rates of technological investment would not be sustainable and there would be a tendency towards the gradual equalization of technical efficiency levels. It is far from clear, however, that the accumulation of knowledge should be subject to the law of diminishing returns. If the cost of additional innovations falls with scientific or production experience, for instance, the return on technological investment may not be a decreasing function of the stock of accumulated knowledge, and cross-country differences in levels of technological effort could persist indefinitely.

Hence, technical progress could be an important divergence factor. But there are also forces that point in the opposite direction. As Abramovitz (1979, 1986) and other authors have pointed out, the public good properties of technical knowledge have an international dimension that tends to favour less advanced countries, provided they have the capability to absorb foreign technologies and adapt them to their own needs. The idea is simple: not having to reinvent each wheel, followers will be in a better position to grow quickly than the technological leader, who will have to assume the costs and lags associated with the development of new leading-edge technologies. The resulting process of technological catch up could contribute significantly to convergence, particularly with the group of industrialized countries that are in a position to exploit the advantages derived from technological imitation.

In addition to decreasing returns and technological diffusion, the literature identifies a third convergence mechanism that, although featured less prominently in theoretical models, is likely to be of great practical importance. This mechanism works through structural change, or the reallocation of productive factors across sectors. Poorer countries and regions tend to have relatively large agricultural sectors. Given that output per worker is typically much lower in agriculture than in manufacturing or in the service sector, the flow of resources out of agriculture and into these other activities tends to increase average productivity. Since this process, moreover, has generally been more intense in poor economies than in rich ones in the last few decades, it may have contributed significantly to the observed reduction in productivity differentials across territories.

In conclusion, economic theory identifies forces with contrasting implications for income dynamics. Convergence mechanisms feature prominently in the neoclassical and catch-up models that dominated the literature until recently. The perceived failure of the optimistic convergence predictions of these models, however, has motivated the search for alternatives and contributed to the development of new theories that incorporate various divergence factors. Some of the pioneers of the 'endogenous growth' literature (especially Romer (1986 and 1987 a and b) focussed on the possibility of non-decreasing returns to scale in capital alone, while other authors, such as Lucas (1988), Romer (1990) and Crossman and Helpman (1991), developed models in which the rate of technical progress was determined endogenously and differ permanently across countries, reflecting differences in structural characteristics. In both cases, the theory allows for the possibility of a sustained increase in the level of international or interregional inequality.

The focus of this study is on the convergence theory. Studies have shown that since the 1970s the United State of American, majority of European and other developed countries around the world are converging or evolving away from state intervention principles in housing finance towards market-based economies. The converging tendency for housing entailed a reduction in housing subsidies, reforms in social housing and encouraging of a robust housing finance market ñbased economic in African . By extension, if housing finance market could transform the economies of United State and other developed countries, it means housing finance market as well could transform the economics of Africanös states and place them on the path of sustainable economy growth.

Path Dependence theory. There are different definition of path dependency theory, but they all seem to agree that it is óan idea that tries to explain the continued use of a product or practice based on historical preference or useô. This holds true even if newer, more efficient products or practices are available due to the previous commitment made. Path dependency occurs because it is often easier or more cost effective to simply continue along an already set path than to create an entirely new one.

David (2007), illustrated path dependence theory with an example of a town that is built around a factory. He argues that it make more sense for a factory to be located a distance away from residential areas for various reasons. However, it is often the case that the factory was built first, and the workers needed homes and amenities built close by for them. It would be far too costly to move the factory once it has already been established, even though it would better serve the community from the out skirts of the town. He further argues that Path dependence is an impact concept for social scientist engaged in studying processes of change, as it is for students of dynamic phenomena in nature. A dynamic process whose evolution is governed by its own history is óPath dependentô. The concept, thus, is very general in its scope, referring equally to developmental sequences (whether in evolutionary biology or physics) and social dynamics (involving social interactions among economic or political agents) that are characterized by positive feedbacks and self-reinforcing dynamics.

On the contrary, Bengston (2009) posits that there are three central factors to be consider when using õpath dependencyö as methodology; firstly, identify the events that happened that made a certain historical path to be chosen; secondly, the decision-making processes that made the path dependency event visible should be investigated; and, thirdly, the mechanisms that explain the effects of the õpath dependencyö aspect on the decision-making situation

should be elaborated on. One method to consider the three factors is to write history backwards. Bengtson (2009) further argues that by writing history backwards crucial housing policy reforms that can be better interpreted. In addition, interpreting housing policies backwards, help to explain why attempts to change housing regimes are often characterized by strong resistance. By considering the decision-making and institutionalization processes, the historical logic on which development is founded can better contextualized. Bengtson (2009) also proposes counterfactual analysis as a method to contextualize path dependency. For example looking at what alternative development would have been possible. If the even that lead to path dependency never happened.

Loanable fund interest theory

The two main theories whose concepts have been adopted in the discussion are: (1) Loanable Funds Theory of Interest Rate and (2) Liquidity Preference Theory. According to the loanable funds theory of interest, the rate of interest is calculated on the basis of demand and supply of loanable funds present in the capital market. The concept was formulated by Knut Wicksell, a Swedish economist (Economy Watch, 2010). One of the basic tenets of the loanable funds theory is that, interest rate is a major factor in the determination of availability of funds for housing in the housing finance market. The theory advocates that both savings and investments are responsible for the determination of the rate of interest in the long run. On the other hand, short term interest rate is calculated on the basis of the financial conditions of a particular economy.

Basic assumptions of the theory include: the rate of interest depends on the availability of loan amounts. The availability of such loan amount is based on certain factors like the net increase in currency deposits, the amount of savings made, willingness to enhance cash balances and the opportunities for the formation of fresh capitals. Other assumption of the theory is derived from the notion that savers make a decision between consumption now and consumption in the future. The more people consume now out of present income (and the less they save and hence the smaller are funds available for investment) the lower will be future income. Thus, a trade-off always exists between present consumption and future consumption. It is assumed that people will prefer to consume now, other things being equal. Hence to persuade them to save and provide funds for investment, they must pay interest. The real interest rate is therefore, the rate needed to persuade people to forgo present

consumption. It follows that savings will be positively related to the rate of interest (Economy Watch 2010; Howells and Bain, 1994).

Similarly, the nominal rate of interest is determined by the interaction between the demand and supply of loanable funds. Keeping the same level of supply, an increase in the demand for loanable funds would lead to an increase in the interest rate and vice versa.

Due to government intervention, the loanable funds theory is not operationalised in the Nigeria Housing Finance Market. The rate of interest of mortgage loan is not determined by the forces of supply and demand in the market. The Federal Mortgage Bank of Nigeria (FMBN), which is the apex regulatory body of Primary Mortgage Institutions (PMIs), gives out loans to subscribers of the National Housing Fund at an interest rate of 6 percent per annum. On the other hand the Central Bank of Nigeria (CBN), directed Money Deposit Banks to give mortgage loan to prospective borrowers at an interest rate ranging from 6 percent to 8 percent. This rate the Money Deposit Banks considered as not competitive, and therefore, not commercially viable. This is one of the causes of the market inability to mobilize funds from the surplus sector of the economy and pass it to the deficit sector for housing development.

In economics, the loanable funds market is a hypothetical market that bring savers and borrowers together, also bring together the money available in commercial banks and lending institutions available for firms and households to finance expenditures either investment or consumption. Savers supply the loanable funds, for instance, buying bonds will transfer their money to the institution issuing the bond which can be a firm or government. In return, borrowers demand loanable funds, when an institution sells a bond, it is demanding loanable funds. **Another term for financial assets is “loanable funds”**, funds that are available for borrowing, which consist of household savings and sometimes bank loans. Loanable funds are often used to invest in new capital goods, therefore, the demand and supply of capital is usually discussed in terms of the demand and supply of loanable funds. (McConnell, and Brue, 2005; Wessels, 2006).

Similarly, the **liquidity preference theory** of interest introduced another factor as responsible for people's propensity to save in an economy. According to the liquidity preference theory, the key element in determining the actual amount of saving that takes place in a given time period is the level of income itself. It argues that, interest rate might, of course, have an impact on savings levels but the difference between the amount of saving in

one period and that in another is much more likely to be because the level of income has changed. In other words, people make saving plans on the basis of their expected level of income and the expected rate of inflation. In most cases these expectations are not fulfilled, because their forecast about expected income and inflation is often wrong. Under such circumstances, the most pressing question does not concern current and future consumption (as assumed by loanable funds theory) but is about the way in which to hold the existing level of wealth. It further argue that in an uncertain world people seek a degree of liquidity and it is this demand for liquidity that is a major element in the determination of interest rates. (Jhingan, 2001).

Taking the two theories together, it could be said that the two major determinant of saving in a given economy is rate of interest and the level of income. While the level of investment is a function of savings.

Neopatrimonialism Theory

Neopatrimonialism refers to a system of governance where the formal rational-legal state apparatus co-exists and is supplanted by an informal patrimonial system of governance. Patrimonialism is defined as a social and political order where the patrons secure the loyalty and support of the clients by bestowing benefits to them from own or state resources. Neopatrimonialism gives rise to a hybrid state where real decision-making power about state functions, such as resource distribution, lies outside of the formal institutions. Instead, decisions about resources are made by powerful politicians and their cronies who are linked by informal, personal and clientelist networks that exist outside of the state structure. (Cammack, 2007).

Mkandawire (2013) asserted that the concept of neopatrimonialism is not new. It was employed by Eisenstadt (1973) much earlier: in order to distinguish between patrimonialism in traditional and modern contexts. In its earlier incarnation, it was not about corruption but weakness of the state. Rather, it was simply one form of exercising power which incorporated Weberian forms of patrimonialism and rational-legal authority. Earlier writers made no assumption about its efficacy in goal attainment; and generally tended to view it as a form of social capital appropriate to certain stages of development. Their perspective held that the co-existence between modernity and tradition – dualism, indeed – represented an inevitable phase in the process of development. The elites of developing countries might therefore use their charisma and other cultural symbols to mobilize and galvanise their societies, or to

ensure political stability (Apter, 1965). In any case, the linear, teleological view of history suggested that patrimonialism dictatorship and even corruption could be treated as inevitable but not necessarily fatal in the match to modernity (Huntington, 1968) (J. Taylor, 1979).

Things began to change in the late 1960s, when the idea of *néopatrimonialisme* was used to explain why African societies were not *modernising*, and the failure of *charismatic* leaders who were overthrown or whose image had lost the lustre of liberation struggles. Yet presumably because, for much of the decade, African economies performed well; as well as the rise of the dependency school, which had a focus on external factors, the idea did not catch on. By the 1980s, however, *néopatrimonialisme* assumed far greater prominence, and became tethered to a new problem: Africa's poor economic performance and its internal causes. If in earlier work, *néopatrimonialisme* provided evidence of underdevelopment and a stage in the process towards development, the new deployment of ideas of the modernisation school had it that the causation ran from *néopatrimonialisme* to the economy. The new reality held that the marriage between tradition and modernity was not only an unhappy one; but also lethal to both the partners and their offspring. Somehow, Africa had managed to combine features of tradition and modernity into a concoction which had proven to be a debilitating *witch's brew*.

Francisco (2010) Observes that *Neopatrimonialisme* is the vertical distribution of resources that gave rise to patron- client networks based around a powerful individual or party. Once argued to be necessary for unification and development after decolonization, these regimes have supplanted the role of the inherited colonial institutions for the benefit of a few individuals. It is significant nowadays because it affects almost all sub-Saharan states to differing degrees and is not regarded as corrupt behaviour by the population, who rely on the system for their own survival. *Neopatrimonialisme* affects policy making, especially development projects, and is responsible for the misuse of aid and state budgets.

Neopatrimonialisme has been argued by many to be the fundamental (and even inherent and inevitable) impediment that prevents African societies from evolving from their primary export economies (Darnton, 1994). The extent to which this is true and whether the term can be useful at all when exploring the manner in which African politics are carried out is arguable (Theobald, 1982). As defined by Thomson (2004), patronage consists on the centralization of power on *an* individual to whom all within the system owe their position: basically, *an* exchange relationship between unequals (Boas, 2001). It is a political regime

based on the personal use of one man or party of public resources and the preferential (instead of meritocratic) appointment of civil servants and, as Fredslund (2000) points out, this could be interpreted as manifest corrupt practices and illegitimate behaviour according to the international community.

For Weber however, patrimonialism is not a synonym for corruption, bad governance, violence, or evidence of a weak state (Weber, 1947 quoted in Pitcher, Moran and Johnston, 2009:126). It is rather a distinct form of acquiring state legitimacy and of tackling difficulties in statecraft specific to Africa, whose dynamics were already deeply rooted in the continent since pre-colonial times (Berman, 1998: 305). Neopatrimonialism (or modern patrimonialism, Erdmann and Engel: 2006) thus arises where patronage politics have managed to supplant the legal-rational apparatus (The adopted bureaucratic institutions) imposed on African nations during the colonial era (Nawaz: 2008:2). This has given birth to hybrid states, where modern formal institutions exist alongside regimes based on the giving and granting of favours (Cromwell and Chintedza, 2005:2) and where the public/private dichotomy in policy decisions and resource distribution becomes hard to distinguish.

The significance of Neopatrimonialism and the extent to which it has permeated African politics requires deep exploration. The latest Afro-barometer briefing illustrates how, although there is considerable diversity in forms of governmental activity regimes in Africa are unconsolidated hybrid systems, and that all regimes have been considered, at one point or another, as patrimonial or neopatrimonial in nature by academics (Bratton and Mattens, 2009:2) furthermore, Bratton and van de Walle have claimed that neopatrimonial practices are not just a characteristic of the African regimes, but rather the core feature of post-colonial politics in Africa (1997:3). Pitcher, Moran and Johnson argue that the evident popularity of this type of regime persists because it keeps being presented by leaders as an inevitable stage in some linear progression, necessary to evolve away from the backwardness label imposed on sub-Saharan countries after decolonization (2009:128).

It is true that, after independence, liberation movements found themselves leading fragmented and very young states, and thus the Africanisation of the bureaucracy in the form of authoritarian patrimonialism took place (Erdmann and Engels: 2006) to ensure unity and economic strength in these weak states. Although the dynamics of neopatrimonialism may cause rejection from a more rational point of view, we should understand that its

contemporary importance lies in the constant 'uncertainty' that people in Africa find themselves in (ibid, 21) to ensure their survival and that of their community (Boas, 2001). A phenomenon known as 'economies of affection' (Morris, 2003) has always existed in countries such as Ghana, Kenya or the former Zaire, and it describes the African usage of patron-client networks 'as a means of facilitating moral, social and economic support among the indigent rural people' (Singh, 1999), based on 'blood, kin, community or other affinities' (Hayden, 1983). Patron-client networks became accepted, and therefore indispensable: they provide protection not only for the individual, but also for the community. The system grants access to resources or labour for individuals, and their wealth (hopefully) later trickle-down for the benefit of the whole community (Osseo-ñ Asare, 1984).

Neopatrimonialism is also significant in terms of policy design and implementation. Neopatrimonial politics have developed the capacity of being able to divert public resources (from national tax revenues and aid funds) for private lucrative gain, 'undermining development possibilities already restricted by social and economic constraints' (Cromwell and Chintedza, 2005:3). In the case of Zambia, neopatrimonialism has continued even after the abolition of the party rule and is still regarded as an important mechanism for ensuring continued support for the ruling party and access to resource (ibid: 4). Development policies are designed accordingly, where food and agricultural projects are devised to suit 'neopatrimonial logic rather than objectives of food security or poverty reduction' (deGrassi, 2008: 108). In the long term, this presupposed low degrees of security and development, ensuring the continuity of the system as the only means for survival at all stages in the social ladder (Cammack, 2007).

Neopatrimonialism is the foundation stone for the system which drives African politics. Although some academics argue that it is a sign of underdevelopment and backwardness or the phenomenon that prevents development from taking place, others have insisted that it is a political system that fits African social frameworks. Patronage networks were deeply engrained in the continent before colonialism, and therefore it should not be surprising to discover how new parties have managed to adapt the inherited post-colonial foreign bureaucratic institutions to the pre-existing system. Of course, such structures persist because many individuals in African societies need them as their main or only source of income, and thus everybody is bound to accept them because, in theory, a whole community can benefit from the favours granted from a politician to an individual from the area. Because of this

social acceptance, neopatrimonial politics have managed to permeate all political levels, affecting the distribution of resources and distorting development plans and diverting aid funds to ensure the survival of the system.

Nawaz (2008) assert that a neopatrimonial regime makes the government a transfer pump: the government collects resources and distributes them to its supporters. While such transfers may be a feature of many political systems in functioning democracies the transfers are more impartial and based on the needs of the public at large. On the other hand, in neopatrimonial systems the transfers only benefit particular groups who are connected to the politicians through patronage networks, at the cost of the rest of the constituents.

The basic structure of neopatrimonial regimes consists of three sectors- the *ãnsö*, the *õoutsö* and the government. The government derives its support by providing patronage to the *ãnsö* (clients, cronies etc.) and funds this by taxing the *õoutsö*

Resource distribution in neopatrimonial systems is always motivated by the patron's incentive to ensure incumbency. However, the specific resources and distributive mechanisms of patronage networks vary by the cultural, economic and political institutions found in particular countries. Distribution of resources or benefits might be primarily motivated by personal relationships or ethnic tribal loyalties. In such cases distribution can take the form of personal favours such as, appointing relatives or people from the ruler's ethnic/tribal group to important government posts. This has been found to be the case in countries as diverse as Cameroon, Zair, Cuba, Nicaragua, Iran, etc.

In Ghana, Lindberg found that practices of patronage include favours such as attending to individuals' school fees, electricity and water bills, funeral and weeding expenses; or distributing cutlasses and other tools for agriculture, or even handing out *õ chop-moneyö* or cash sums to constituents. It might also entail personal assistance in dealing with the authorities, whether police, courts headmasters, local government officials or ministries. Sometimes help involves finding someone a job or a place to stay, putting them in touch with someone else for jobs, contracts, or other services, or just taking to them about family issues, planning funerals and other private issues.

Lindberg also found that people perceived incumbent MPs as wealthier and in control of state resources, which they should be obliged to share with their people. Legitimate spending on items like reading books for schools, waterholes, roofing for community buildings, footballs

and other items for young clubs and the like, didn't really count according to the interviewees. Similar examples have been found in countries as diverse as Russia, countries of sub-Saharan African and Latin America.

Neopatrimonialism gives rise to high inequality in access to resources a notable feature of neopatrimonial system is high income inequality. The élites of the system benefit disproportionately compared to the masses. For example, in Nigeria, 80% of the oil revenue is assumed to have accrued to 1% of the population. According to the World Bank, countries characterised by neopatrimonial systems also comprise the group of countries that exhibit the highest range of Gini coefficient which indicates large inequality in wealth distribution in these countries. For more information on Gini coefficients of neopatrimonial countries such as Bangladesh, Nicaragua, Cameroon, Ghana, Uganda etc.

Neopatrimonialism hinders long-term availability of resources Fritz and Menochal in 2006 have argue that in the case of Nigeria, the elites in neopatrimonial states govern by a particularistic logic which generates a very weak sense of the public realm. The channelling of benefits to select groups whose demands in are often quite strong deprives resources from being used to provide public goods and build infrastructure. At the same time, being able to access universities and hospital in the developed world, and enjoying personal wealth and status, elites lack incentives to engage in broad-based development, especially where a sense of common nationhood is weak.

Gibson and Hoffman have argued that leaders in many neopatrimonial systems also have incentives to prevent development in order to perpetuate the system of élites and masses. For example, in a study of sub-Saharan African countries they found that since higher levels of urbanization reduce the costs for the opposition to organize and increase citizen demand for public goods, the ruler's patronage costs are higher in more urbanized countries. Under-investing in transport and communication between the urban and rural areas allowed rulers to reduced urban population. They have also used tactics such as providing food subsidies to the urban areas to pacify the population and ensure their grip on power. Such tactics sacrifice short-term political gains for long-term development and growth strategy, which turn hurts the availability and consequently access to resources in the long run.

Accountability in neopatrimonial regimes operates in two principle ways- formal democratic mechanisms (such as elections, rule of law, access to information etc) and informal pressures.

Elections as an accountability mechanism political representation through voting is the primary formal accountability mechanism in neopatrimonial systems. Clients/ constituents have the option of voting out the rulers if they fail to deliver on their campaign promises. It has been found that if the 'bargain' between the leader and follower is actually carried through then it is normal for the recipients to continue to support him. For example, a study conducted in Ghana right after 2001 parliamentary elections found that of the 34 MPs interviewed, the only one who claimed not to distribute personal patronage had lost his seat.

Politicians also face considerable pressure from their constituents around elections to disburse resources. Lindberg found that neopatrimonial system often turn election campaigns into a 'harvesting season' for the electorate. The year of the election becomes the time when it is time to 'reap the fruits' from the 'parliamentary tree' Unlike established liberal democracies where the electorate expect politicians to 'deliver the goods' when the election has been won, in a patron-client environment the electorate may push politicians to provide the 'rewards' before the election and in the form of personalized favours. As the political game becomes more competitive, clients may also utilize a greater room for manoeuvre for electoral blackmail. For example, in Ghana, the interviewed MPs increasingly mentioned blackmail message delivered by the constituents as elections came closer. The political contest may be turned into an economic competition based on the strength and extension of patronage network.

Neopatrimonial political parties provide choices to voters Democratic institutions weakened by neopatrimonialism are only capable of offering poor choices to the voters. Cammack et. Al in 2006 found that in Africa, the limited expansion of real voter choice that elections have provided is linked to the weakness of democratic institutions. African parties are weakly institutionalised and characterised by poor organizational capacity. They often lack a structure that can penetrate the national territory, have dormant organisations between elections and few, if any, organizational resources. While countries with functioning formal democracies have witnessed the development of party structures relatively tie functional interests in society (such as working class parties tied to trade unions, Christian parties linked to Catholic churches, agriculture parties tie to farming interests) few such linkages

between the party structure and interest groups can be found in the neopatrimonial state of Africa.

Ruling parties work to weaken political opposition which limits voters' choice at election time. In a neopatrimonial system, the party in power also actively employs repressive mechanisms such as monopolizing public media, corrupt use of law enforcement and the judiciary, constraining access to resources etc. against opposition parties which leads to the deterioration of voter choices.

Given the argument of the proponent of the Neopatrimonialism theory, one could conclude that even though housing finance market has contributed immensely to the economies of most developed nations, it will be difficult to achieve the same feat in the African economies. In order for housing finance market to have the desired impact on African economics, issues associated with neopatrimonialism such as: use of state resources for personal interest, favouritism, corruption and bad political leaders who do not allow economic gains to trickle down to the common man has to be addressed first.

2.1.3 Theories on Economic Growth

According to Aigbokhan (1995), Economic growth means an increase in the average rate of output produced per person usually measured on a per annum basis. It is also the rate of change in national output or income in a given period. Economic growth is the increase of per capital gross domestic product (GDP) or other measure of aggregate income. It is often measured as the rate of change in real GDP. Economic growth refers only to the quantity of goods and services. Gujarati (2002) defines economic growth as an increase in real gross domestic product (GDP). That is, gross domestic product adjusted for inflation. The growth can either be positive or negative. Negative growth can be referred to by saying that the economy is shrinking. This is characterised with economic recession and economic depression. Ullah and Rauf (2013) noted that whenever there is an increase in real GDP of a country it will boost up the overall output and we call it economic growth. The economic growth is helpful to increase the incomes of the society, help the nation to bring the unemployment at low level and also helpful in the deliveries of public services.

Macroeconomic policy refers to those policies of Government aimed at the aggregate economy, usually to promote the macro goals of full employment, stability, and growth. Common macroeconomic policies are fiscal and monetary. Fiscal policy is the macroeconomic policy

where the government makes changes in government spending or tax to stimulate economic growth while monetary policy deals with changes in money supply or changes with the parameters that affects the supply of money in the economy. The objectives of this policy include the achievement of sustainable economic growth and development, stable price and full employment. Some of the objectives set are potentially in conflict with each other, which means that, in attempting to achieve one objective, another one is sacrificed. For example, in attempting to achieve full employment in the short-term price inflation may occur in the longer term.

Ullah and Rauf (2013) asserted that a sound macroeconomic policy has to do largely with the consistent management of short-term policy instruments pursuing a sustainable and predictable pace for aggregate economic variable and major prices (Wages, inflation, interest rates and exchange rates). They established further that monetary, fiscal and exchange rate policies, together with structural reform, have major consequences for the social wellbeing of societies, not only in terms of protection against shocks and crises but also in terms of equity. Many, if not all, of the necessary social policies are of a domestic nature. Pursuing them, however, depends to a considerable extent on the international enabling environment in which the global financial system, the unsettled debt crisis and increasing official development assistance (ODA) flows play a significant role.

The **Neo classical growth models** of Solow (1956) and Swan (1956) believed that, in the long run that technological progress and population growth are the main determinant of economic growth. They are of the view that government can influence the population growth rate, saving rate and incentive to invest in human and physical investment through its different policies such as fiscal, monetary, income and exchange rate policies. These policies can change the equilibrium factor ratio or affect the transition path of steady state growth rate. While endogenous growth model by Barro (1990) and Lucas (1988) believed that physical and human capital do affect economic growth but fiscal policy variables like distortionary taxation and productive expenditure affect the output level and its steady growth rate. According to Neo classical growth model, impact of fiscal policy on steady economic growth is temporary and not the permanent one.

Over the last few decades the macroeconomic policies and economic growth relationship became the hot issue amongst the government, policy makers and researchers. There is a growing literature on the determinants of economic growth in cross countries and country

specific with varied submission and conclusion. For examples Barro (1995) examined the determinants of economic growth and the empirical findings for a panel of around 100 countries from 1960 to 1990 strongly support the general notion of conditional convergence. For a given starting level of real per capital GDP, the growth rate is enhanced by higher initial schooling and life expectancy, lower fertility, lower government consumption, better maintenance of the rule of law, lower inflation, and improvements in the terms of trade while growth is negatively related to the initial level of real per capital GDP. Political freedom has only a weak effect on growth but there is some indication of a nonlinear relation and concluded that there is a strong positive influence of the standard of living on a country's propensity to experience democracy.

According to Zafar and Zahid (2013), their results based on data from 22 countries belonging to the Organisation for Economic Cooperation and Development (OECD), suggest that inflation has a negative effect on economic output which is economically large and statistically significant. They further conclude that a permanent 1 percentage point reduction in inflation would raise growth by just over 0.1 percentage points, and would eventually raise output by about 6 percent. Dewan and Hussein (2001) used a sample of 41 middle-income developing countries to develop an empirical model for growth. The study also presents a wide-ranging examination of both theoretical and empirical evidence on the many ways macroeconomic policies affect growth. The results suggest that apart from growth in the labour force, investment in both physical and human capital, as well as low inflation and open trade policies are necessary for economic growth. Furthermore, the ability to adopt technological changes in order to increase efficiency is also important. Since many developing countries have a large agricultural sector, adverse supply shocks in this sector was found to have a negative impact on growth.

Antwi, Mills and Zhao (2013) study the impact of macroeconomic factors on economic growth in Ghana for the period 1980 to 2010 by means of Co-integration and error correction models using yearly data for the period and then recommend actions that should be taken to speed up the growth process in the country. The findings showed that long-run economic growth is largely explained by physical capital, foreign direct investment, foreign aid, inflation and government expenditure. It is also evident that economic growth is not affected by short-terms changes in labour force. The estimated coefficient of the Error Correction Model, ECM, indicates a mild speed of adjustment to equilibrium. They recommended that

government must reform the tax system and improve its budget balance and government should continue to direct foreign assistance into the programmes that produce public capital since this improves the productivity of the masses and hence, is likely to have a positive long run effect on economic growth. Ullah and Rauf (2013) evaluate the impacts of macroeconomic variables on economic growth in case of some selected Asian countries using panel data from 1990 to 2010 and found that the sample countries economic growth is positively affected by foreign direct investment and saving rate while exports have negative impacts on economic growth and labour force and tax rate have no impacts on economic growth.

Aurangzeb and Ul Haq (2012) asserted that Investment plays an important role in driving growth through increase in productivity levels. Foreign direct investment brings technology and creates employment. It helps to adopt new methods of production and enhances productivity by bringing competition in the economy. Foreign direct investment also introduces innovative management and organizational skills, and explores hidden markets in the economy. It reduces the barriers in adoption of technology and brings improvements in the quality of labour and capital inputs in the host economy. Furthermore investment the impact of investment on the economic growth using multiple regression technique and found that public investment, private investment and foreign direct investment contribute to economic growth significantly concluded that bi directional relationship of gross domestic production with foreign direct investment and public investment while unidirectional relationship of gross domestic production is found with private investment and recommended that Pakistan should make stronger efforts to attract as much FDI as possible to the foreign exchange sectors in the short term.

Rahman and Salahuddin (2010) empirically analysed the relationship between economic growth and its determinants, with special focus on stock market development. Using data for the period from 1971 to 2006 and employed FMOLS and ARDL bounds testing for the long run relationship and ECM for the short run dynamic, the findings suggest a positive relationship between efficient stock markets and economic growth, both in short run and long run while financial instability and inflation have negative effects. Furthermore human capital, foreign direct investment and stock market liquidity have positive effects on economic growth.

Sabir and Tahir (2012) study the impact of different macroeconomic variables on the welfare of the poor in Pakistan, through annual time series data which spanned between 1981 and 2010. Using multiple regression technique to detect the relation between macroeconomic variables and poverty, the findings revealed that GDP growth rate per capital income, major crops, minor crops and livestock had negative impact while inflation and population growth rate had positive impact on poverty and concluded that the reduction in poverty in Pakistan is to be driven by the changes in the macroeconomic variables.

Zafar and Zahid (2013) examine the effects of some of the key macroeconomic variables on economic growth. Employing multiple regression framework and time series data over the period 1959-60 to 1996-97. The quantitative evidence shows that primary education to be an important precondition for accelerating growth. Similarly, increasing the stock of physical capital and openness of the economy contributed to growth. The empirical results also suggested that budget deficit an external debt is negatively related to economic growth. Suggesting that relying on domestic resources is the alternative to finance growth and reinforce the importance of sensible long-run growth-oriented policies to obtain sustainable growth.

For studies conducted in Nigeria, Kolawole (2013) asserted that Macroeconomic stability is fundamental basis of sustainable economic growth, because, it increase national saving and private investment and also improves exports and balance of payments with improving competitiveness. A macroeconomic stability, therefore, to a large extent guarantees economic wellbeing of the people. To this end, there are several factors identified as potential determinant of macroeconomic stability such as low inflation, low deficit, stability of real exchange rate and exchange relationship. These aforesaid factors are serious drivers of economic growth. He empirically examined the growth-effects of macroeconomic stability factors in Nigeria. Using time series data for the period 1980 to 2011 and adopting various econometric techniques such as Granger causality test, and Error, Correction Mechanism (ECM), the results reveal that real interest rate has direct and significant effects on Nigeria economic growth while external debt and real exchange rate impact negatively on growth in the country. The study concluded that for macroeconomic stability to be achieved in Nigeria, each of the factors should be examined individual such that its respective effect on growth could be identified while appropriate macroeconomics policy would be formulated and implemented where required.

Machi (2011) empirically test the determinants of economic growth in Nigeria using time series data ranging from 1970 to 2008 and adopting the Johansen's method of co-integration-regression analysis. The findings showed that policies that encourage investments in physical capital, human capital, man power development, training, research and technological development would boost both short run and long term growth of the economy. Hence policy tools such as fiscal, monetary and income-price policies should be used by the government to achieve economic growth in Nigeria.

Edoumiekumo & Opukri (2013) evaluate the impact of macroeconomic policies on economic development in Nigeria for the period which spanned between 1990 and 2008. Employing multiple regression technique in the analysis, it was discovered that public capital expenditure, fuel price, balance of trade and bank total lending have positive impact on economic development while net foreign direct investment and dummy variable which capture the period of major macroeconomic policies has negative and insignificant effect on economic growth which implies that the structural adjustment programmes introduced in 1986 and covered up to 1994 as well as National Economy Empowerment and Development Strategies introduced since 2004 did not translate into the long run economic growth. Rather they ended in pushing the economy deeper into the depression. They recommended that there is a need to introduced greater depth and comprehensiveness in the ongoing macroeconomic policy, and more efficient utilization of foreign direct investment to make macroeconomic policies impact significant on economic development in Nigeria.

Edoumiekumo and Opukri (2013) evaluate Economic Growth Factor in Nigeria considering the role of Global Trade by using annual time series data from 1981 to 2008. The result shows two co-integrating equations which establish the existence of long run relationship among the international trade. Ordinary Least Square statistical technique was used to assess the degree of influence the variable have on each other. The results show that positive relationship exists between the variables, RGDP, export and import. The export parameter is insignificant at 5 percent. The overall model is significant at 5 percent. While the Granger causality test showed that there is causality between the variables and realized a unidirectional relationship. Real GDP Granger cause export and import granger cause RGDP and export and concluded that Nigeria needs to increase or diversity her export goods to

enjoy more of the benefits of international trade which will have robust impact on her economic growth.

Similarly, Mohammed and Ehikioya (2015) postulated economic growth is a fundamental requisite to economic development. This informs why in Nigeria, growth continuously dominates the main policy thrust of government's development objectives. Essentially, economic growth is associated with policies aimed at transforming and restructuring the real economic sectors. Nevertheless, the lack of sufficient domestic resources, saving and investment to support and sustain the sectors is a major impediment to economic development in the country because of the gap between savings and investment (Imimole and Imoughele (2012). Saving provides developing countries (including Nigeria) with the much needed capital for investment which improved economic growth. Increase in savings leads to increase in capital formation and production activities that will lead to employment creation and reduce external borrowing of government. Low domestic saving rates may maintain low-growth levels because Harrod Domar model suggested that savings is an important factor for economic growth.

After independence in 1960, the immediate challenge that faced the Nigerian economy was how to increase robust economic growth in order to reduce extreme poverty, improve health care, overcome illiteracy, strengthen democratic and political stability, improve the quality of the natural environment diminish the incidence of crime and violence, and become an investment end of choice for international capital, *ceteris paribus*. Long-term broad-based economic growth is essential for Nigeria to increase incomes and enable her to reach her potential of becoming a significant trade and investment partner in the world. While rapid growth in China, Malaysia and India for instance, have lifted millions beyond subsistence living, Nigeria and many other African countries have, however, experienced the opposite by recording low growth rates and even Yaqub (2011) asserted that, the growth of Nigeria economy is sluggish compared to the emerging economy in the world.

Acknowledge these, the Nigerian government and policy makers have embarked on various macroeconomic policies to address these issues. Some of the policies involved the use of monetary and fiscal policy, export promotion strategy, imports substitution strategy, NEEDS, Vision 20 20 20, the austerity measure, etc. the fundamental objectives of the policies include price stability, maintenance of balance of payments equilibrium, and promotion of employment, output growth and sustainable development. These objectives are necessary for

the attainment of internal and external balance of value of money and promotion of long run economic growth.

Economist differ on which policies are most beneficial for long-run growth. For example Dewana Hussein (2001) argues that macroeconomic policies are necessary for long-term growth. However, Anderson and Jodon (1962) postulated that monetary policy has greater and faster impact on economic activity thus suggesting that greater reliance be place on monetary measures than fiscal measure in the conduct of stabilisation policy. Uniamikogbo and Enoma (2001) asserted that monetary variable is more effective and dependable than fiscal variable in affecting changes in economic activities. Other scholars argue that the growth of human capital, that is, investment in education and training contributes significantly to long-run growth (Barro, 1990).

However, despite these macroeconomic policy measures, the performance of the Nigerian economy in terms of growth has been dismal. Available information reveals that the growth of Nigerian economy as at 1990 was 8.2% and decreases to 5.4% and 3.5% in 2000, 2001, and 2002 respectively. It further increased to 9.6% in 2003 and decrease to 5.8% in 2005 and increase marginally to 6.4% and 7.3% in 2008 and 2011 respectivley.

According to Gupta, Guha & Krishnaswami, (2013), an entrepreneurial venture is deemed successful if it is growing. Growth has various connotations. It can be defined in terms of revenue generation, value addition, and expansion in terms of volume of the business. It can also be measured in the form of qualitative features like market position, quality of product, and goodwill of the customers (Kruger, 2004).

As stated earlier, growth is a vital indicator of a flourishing enterprise. There are many factors like characteristics of the entrepreneur, access to resources like finance, and manpower which affect the growth of the enterprise and differentiate it from a non-growing enterprise, Gilbert, McDougali & Audretsch (2006) suggested how and where questions are important in the context of the growth of the enterprise. It has been highlighted that growth is a function of the decision an entrepreneur makes, like to grow internally or externally and where to growth in domestic market or international market. These are many different theories on identifying the main factors underlying the growth of the enterprise. One set of theirs addressed the influence of enterprise size and age on growth (Evan 1987; Heshmatic 2001; Morone and Testa 2008). And the second set deals with the influence of variable such

as strategy organization and the characteristics of the enterprise's owners (Fazzari Hubbard & Pettersen 1988; Lumpkin and Dess 1996; Freel and Robson 2004) on growth of the enterprise. Mateev and Anastasov (2010) have found that an enterprise's growth is related to size as well as other specific characteristics like financial structure and productivity. They further added that the total assets which is one of the measure of the enterprise size has a direct impact on the sale revenue, but the number of employees, investment, investment in R & D, and other intangible assets have not much influence on the enterprise's growth prospects. Lorunka et al. (2011) have found that the gender of the founder, the amount of capital required at the time of starting the business, and growth strategy of the enterprise are very important factors in predicting growth in a small enterprise. They have further highlighted that apart from human capital resource, the growth of an enterprise can be predicted on the basis of commitment of the person starting a new enterprise

In his contribution, Shittu (2012) posit that there is a relationship between financial intermediation and economic growth. He pointed out that while some studies viewed financial intermediation as a function of economic growth, others views economic growth as a function of financial intermediation. He cited several authors, including King and Levine (1993) who argued that the services provided by financial intermediaries-mobilizing savings, evaluating projects, managing risk, monitoring managers, and facilitating transactions are essential for technological innovations and economic development these aroused their curiosity and were motivated to test, empirically, the logic behind this statement. Their quest for knowledge yielded a result, which became the genesis of empirical argument over the need to justify the relationship between finance and economic growth. Beyond this, quite a number of studies have shown that there is a relationship between finance and economic growth. Some of these works include; Jayaratne and Strathan (1996), Demirgye-kunt and Maksimovic (1998), and Rajan and Zingales (1998).

King and Levine (1993) conducted a pooled cross-country time-series survey of eighty countries for the period 1960 ñ 1989 with a view to establishing the relationship between financial development and economic growth. Four variables were developed and used as proxy for financial development. These include; financial depth, relative importance of specific financial institution, proportion of credit allocated to the private sector, and the ratio of claims on the non- financial private sector. On the other hand, the average long-run real per capital GDP, the rate of physical capital accumulation, the ratio of domestic investment to GDP, and residual measure of improvement in the efficiency of physical capital allocation

were used as a proxy for economic growth. Using the cross-country regression and some other statistical test, this study established that the four indicators of financial development were positive and statistically related to growth, and other indicators of economic growth.

Jayaratne and Strathan (1996) affirm that financial development impacts positively on economic growth but with a clause that there is an improvement in the quality of bank lending. Using the bank deregulation reform in the US as a case-study, it was established that the rate of real, percapita growth in income increase significantly. This impact of the reform in the financial system on economic growth was attributed to the improvement in the quality of bank lending, and not the increase in volume of bank lending.

Odedokun (1998), in his study, emphasised that even though financial intermediation promotes economic growth, the growth-promoting effects are more pronounced in the low-income countries. Using a cross-countries. Using a cross-country data analysis of 71 less developed countries (LDCs) for the period 1960 to 1980 the study expanded the neo-classical one sector aggregate production function with financial development as an input. Two models were derived with economic growth as the dependent variables, while the regressors include: Labour force growth, investment GDP ratio, real export growth, and financial depth. The models were estimated using the ordinary least square (OLS) techniques, as well as the generalized least square (GLS) technique. Besides the strong positive relationship that manifested between financial intermediation and economic growth, the study establishes that the impact of financial intermediation is at par with export growth and capital formation. However, its impact on economic growth is superior to labour force growth.

Rajan and Zingales (1998) seek to establish the impact of financial development on industry-specific growth. This necessitated a cross-country, cross-industry-specific growth. This necessitate a cross-country, cross-industry study. The primary hypothesis was, óindustry that are more dependent on external financing will have relatively higher growth rates in countries that have more developed financial market, The study designed a multiple regression model, which specified growth as the dependent variable and the financial development, external finance dependency, country specific factors and industry-specific factors. The average annual real growth rate of value-added was used as a proxy for growth, while value ñ added and gross fixed capital formation for each industry obtained from the Industries Statistics Year Book (1993). Two finance indicators were used as a proxy. These are capitalization

ratio and accounting standards. The study asserts that financial development enhances growth in indirect ways.

Demirgüç-Kunt & Maksimovic (1998) carried out a firm level-based study to justify their assertion with respect to the relationship between finance and economic growth. This study shows that a developed financial system and legal system stimulates growth. This was achieved by using cross-sectional data drawn from thirty countries (developed and developing) for the period 1983 to 1991. They are of the view that an active stock market is an indication of a well-developed financial system. While the firms in a country with a high rate of compliance with the rules and regulations have access to the capital market, the developed financial system will ensure growth of these firms. Hence, finance stimulates growth.

Levine, Loayza, and Beck (2000) changed the face of the argument on the relationship between financial intermediation and economic growth. This study seeks to establish the impact of the endogenous component of financial intermediation on economic growth. A robust methodology, which comprises two models and two estimation techniques, was employed. The first model, which defines economic growth as a function of finance indicators and a vector of economic growth determinants, was estimated using the pure cross sectional estimation technique. The second model is a dynamic panel model and is estimated using the Generalized Methods of Moment (GMM). Both tests confirm the strong positive impact of the endogenous components of financial intermediation on economic growth. They, however, noted that countries with high priority for creditors' protection, strong will to enforce contracts, and unambiguous accounting standards have the potential for a developed financial intermediation.

Gromo and Vayanas (2010) introduced more instrumental variables with a view to establishing a more robust empirical relationship between financial intermediation and economic growth. The study uses a cross-country analysis of 71 countries for the period 1960 to 1995. A linear regression model, which defines economic growth as a function of financial intermediation and a set of conditioning variables, was estimated using the Generalized Method of moments (GMM). While the instrumental variable introduced included; religious composition, years of independence, latitude, settler mortality, and ethnic fractionalization, three conditioning variables were also used. These include; simple sets (initial GDP, and level of education), the policy set (simple set, government size, inflation, black market premium

and ethnic diversity), and the full set (simple set, policy set, number of revolution, coup, number of assassination per 1000 inhabitants, and trade openness). This study also supports the argument that a positive relationship exist between financial intermediation and economic growth. However, it emphasized that this will be true if financial intermediation is measured by liquid liabilities and private credit as a ratio of GDP , while it will be weaker if it is measured using the Commercial-Central Bank ratio.

Hao (2006) seeks to establish the relationship between financial intermediation and economic growth, using a country-specific data from China. The study focused on the post ñ 1978 reform period, using provincial data (28 Provinces) over the period 1985 to 1999. The study employed the use of linear model, which expresses economic growth as a function lagged economic growth, financial development indicators (banks, savings, and loan-budget ratio), as well as a set of traditional growth, determinants (population growth education, and infrastructural development). The study uses the one-step parameters estimates for the Generalized Method of Moments (GMM) estimation and finds that financial intermediation has a causal effect and positive impact on growth through the channels of house-holds savings mobilization and the substitution of loans for state budget appropriations. However, the study reveal that bank, as an indicator of financial development, is significant but negatively related to growth. This was attributed to the inefficiency is loan distribution and the self-financing ability of the provincial governments.

Romeo-Avila (2007) also confirms the positive impact of finance on growth. He investigates the relationship between finance and growth, with emphasis on the effect of financial deregulation and banking law harmonisation on economic growth in the European Union. The study establishes that financial intermediation impacts positively on economic growth through three channels.

The study by Deidda (2006) is quite informative and unique. It is a micro-based study and uses the inter-temporal approach to explain the theoretical rationale of the impact of financial intermediation on economic growth. It assumes a transition from period 1 (financial austerity) to the period 2, which is the period when financial intermediation is attained. Although this study is theoretical in nature, the General Equilibrium Analysis was used and it concludes that the growth effect of costly financial development is ambiguous when regime switch is associated with the adoption of more capital intensive technology. There is no empirical work to this effect yet.

The causal Relationship between finance and economic growth, the study by Odhiambo (2008) proves very useful in this regard. The study prepared a simple table, which summarizes previous empirical studies on the causal relationship between finance and economic growth. Several studies, however, have been conducted since then to further enhance the understanding of the causal relationship between finance and economic growth. While Liang and Teng (2006), Odhiambo (2008), Coccoresse (2008), and Odhiambo (2011) emphasize that economic growth granger cause financial development, others which include; Abu-Bader and Abu-Qarn (2008), Wolde-Rufael (2009), Karn Nazlioglu and Agir (2011) and Bangake and Eggoh (2011) argue otherwise.

Odhiambo (2008) seeks to examine the dynamic causal relationship between financial depth and economic in Kenya. The study focuses on the period, 1969 to 2005, and include savings as an intermitting variable. To achieve this task, this study adopted two econometric techniques; the dynamic tri-variate granger causality test and the error correction model (ECM Modelling). This study concludes that one-way direction causality, from economic growth to finance, exists in Kenya. In other words, finance plays a minor role in the attainment of economic growth in Kenya. Wolde-Rufael (2009) is of a contrary opinion. Using a different econometric technique, the Quad-variate Vector Autoregressive (VAR) framework and data from 1966 to 2005, it concludes that two-way directional causality exists in Kenya.

Abu-Bader and Abu-Qarn (2008) seeks to examine the causal relationship between financial development and economic growth. The study focuses on Egypt over the period, 1960 to 2001. Using the trivariate VAR model, this study concludes that two-way directional causality exists in Egypt. In other words, finance leads growth, and economic growth induces financial development. Conversely, Odhiambo (2011) argues that economic growth granger causes financial development in South Africa. The study seeks to examine the dynamic causal relationship between financial development, economic growth, and poverty reduction. Using a trivariate causality model and the ECM modelling to analyse the data collected from 1960 to 2006, it concludes that the hypothesis of finance-led growth do not hold in South Africa.

Gries, Kraft, and Meierrieks (2009) seek to test for the causality between financial deepening, trade openness, and economic development. This study focuses on 16 Sub-Saharan African countries, using annual time series observations. For the purpose of establishing the causal

relationships, the Hsiao π Granger method, the Vector Auto-Regression (VAR), and the Vector Error Correction Model (VECM) were used. This study shows sparse support for the hypothesis of finance-led growth. It, however, suggests that the adoption of a more balanced policy approach may reduce financial system d efficiencies among the Sub-Saharan Countries.

Kar, Nazlioglu, and Agir (2011) focused on developing countries and also introduced new indicators of financial development with a view to establishing the causal relationship between financial development and economic growth. Using countries, which constitute the Middle East and North Africa (MENA) for the period 1980 to 2007, the study uses a simple linear model. This model defines economic growth as a function of financial development. Six new indicators of financial development was introduced and these include; the ration of narrow to income, ratio of broad money to income, ratio of quasi money to income, ratio of deposit money bank liabilities to income, ratio of domestic credit to income, and ratio of private sector credit to income. On the other hand, the real income was employed as a proxy for economic growth. The Granger Causality test was employed to establish the casual relationship between financial development and economic growth. The study concludes that the direction of causality is bi-directional, but it is country or financial development indicator specific. This study, however, suggests that a strong link may exist between financial development and the real sector.

Bangake and Eggoh (2011) also support the view of an existing two-way directional causality between financial development and economic growth among developing countries. This study focuses on seventy-one countries, which included eighteen developing countries, for the period 1960 to 2004. The study carried out its empirical analysis using both the panel co-integration tests and the Panel co-integration estimation (i.e. Dynamic OLS and panel VECM approach). It establishes that both financial development and economic growth have influence on one another, but suggests that a long π run policy approach may prove beneficial, among the developing countries.

Hassan, Sanchez and Yu (2011) focused more on the low and middle income countries from 1980 to 2007. This study comprises 168 countries, which are classified by geographic regions, and uses the panel estimation techniques (i.e the VAR models). The study came up with two important findings. These include; a strong long- run linkage between financial development and economic growth, and two π directional causality exist between financial

development and economic growth among the Sub-Saharan African countries. The East Asian countries, and the Pacific countries. This study emphasized the need for the adoption of long-run policy measures among the developing countries.

2.6 EMPIRICAL REVIEW

2.6.1 Transnational Housing Finance Market and Economic Growth

The role of housing finance in the acceleration of economic growth of nations has been acknowledged worldwide, especially in the developed economics. IMF (2011) posit that the importance of housing finance could be seen through housing market booms usually followed by busts have been associated with financial instability and significant costs to the economy in many countries over the years. They argued that the global financial crisis of 2007-2009 was occasioned by excessive subprime lending in the US. The crises quickly spread to other parts of the world such as Ireland, United Kingdom and Spain, causing financial instability.

Likewise Reinhart and Rogott (2009) showed that the six major historical episodes of banking crisis in advanced economies since the mid ñ 1970s were all associated with a housing bust. They document that this pattern can also be found in many emerging market crises, including the Asian financial crisis of 1977-98, with the magnitude of house price declines being broadly similar in both advance and emerging market countries.

Giving that housing busts weaken household and financial sector balance sheets, housing-linked recessions are, on average, more severe than recession that are not accompanied by housing bursts. Based on 1960-2007 cross-country data from the Organization for Economic Cooperation and Development (OECD), Claessens, Kose, and Terrones (2008) show that output losses in recessions accompanied by housing busts are two to three times greater than they would otherwise be. Moreover, housing busts tend to prolong recessions (averaging 18 quarters, compared with four quarters for the typical recession), as falling house prices act as a further drag on household consumption and residential investment while putting financial intermediary balance sheets under stress.,

Since house purchases typically involved household borrowing, house prices are likely to be strongly driven by credit conditions and household leverage. An influential set of studies Stein, (1995); Kiyotaki and Moore, (1997) posit that household can borrow only a fixed multiple of their down payment. This assumption of a fixed ñleverage ratioö implies an ñacceleratorö mechanism, where a positive or negative shock to income (or net worth) is

amplified by an expansion, or contraction, in borrowing capacity, in turn influencing house prices. Positive shocks to household income translate into large house price increase where prevailing leverage ratios are higher (e.g., in the United Kingdom), and smaller increases in countries where such leverage ratios are lower (e.g. in Italy).

Leverage and lending standards more broadly can evolve in a procyclical fashion, resulting in powerful swings in house prices (Geanakoplos, 2010). Relaxing lending standards good times drives up both credit and house price growth while a tightening of standard puts downward pressure on house prices. A number of studies of the recent housing boom in the United States show that rapid growth in credit to prime and subprime borrowers was associated with a sharp deterioration in lending standards that in turn fuelled house price appreciation.

It has been observed that housing finance has a positive and significant impact on the US economy and other advanced economies. The financial crisis that commenced in 2007 and its aftermath have been widely referred to as the "Great Recession" and with good reason. From its beginning until its nadir in 2009, it was responsible for the destruction of nearly \$20 trillion worth of financial assets owned by U.S. households. During this time, the U.S. unemployment rate rose from 3.7 percent to 10 percent. By 2010, college graduates fortunate enough to find a job were, on average, earning 17.5 percent less than their counterparts before the crisis- and experts were predicting that such a decline in earnings would persist for more than a decade.

The crisis also spread beyond U.S. borders. As consumption and income declined in the United States, many countries experience a significant reduction in exports as well as a decline in the investments that they held in the United States. As a result, global GDP declined by 2 percent in 2009. It has been estimated that between 50 million and 100 million people around the world either fell into, or were prevented from escaping, extreme poverty due to the crisis. Another factor attributable to the financial crisis was the low interest rate of mortgage loans. IMF (2011b) puts it thus, the extremely low mortgage rates were particularly important, because they motivated an unprecedented rush to buy real estate. Even people who ordinarily would have little hope of obtaining a mortgage got in on the action. As record numbers of consumers bought homes and investment properties, housing prices surged. Most people- realtors in particular-did not appear to think that house prices could ever go down again.

The housing bubble was an archetypal bubble. Like other before it this bubble began innocently enough, as an increase in demand for real state. As stated previously increase in market demand tends to increase prices, and the housing market proved no exception. Unfortunately, the increase in home prices fed a speculative frenzy, and millions rushed to buy, believing that prices could only go in one direction-up! The buyers included not only would be homeowners, but also speculators who were buying simply with an interest in flipping the property (reselling at a higher price). The naïve view exhibited by so many is characteristics of earlier bubbles, during which the lessons of the past was ignored. To obtain a sense of the magnitude of the housing bubble, consider that average real home prices- that is, adjusting for inflation-were only 2 percent higher in 1997 than a century earlier. But prices skyrocketed starting in the late 1990s, and by the time they peaked in 2006 the average price of a house was nearly twice the long term average price in the previous century. And the subsequent collapse was such that a mere six years later, prices has reverted to their long-term trend.

What fed the speculative flurry that gave rise to such a massive bubble? In part, it was the bubble immediately preceding it – the dot-com bubble in technology stocks.

Yet the illusion of prosperity created by the dot-com bubble only begins to explain the property bubble that succeeded it. Another major factor was the unprecedented access to credit in the form of mortgages. During the mid- 1990s, U.S. households borrowed an annual average of approximately \$200 billion in the form of mortgages for home purchases. The figure rose abruptly to \$500 billion for the period 1998-2002 and to \$ 1 trillion from 2003 to 2006. While widespread access to credit is arguably critical for a vibrant economy, an exceedingly rapid increase in borrowing has, throughout history, been among the most consistent determinants of financial crises. By inflating bubbles, credit booms has invariably led to financial busts.

The key Federal Reserve interest rates – particularly the federal funds rate – are decisive in regulating credit availability. As stated earlier. Fed uses monetary policy to control interest rates; the critical point to remember in this context is that changes in the Fed's key rates percolate through the economy, because banks that can borrow at lower rates will also lend at lower rates and vice-versa. The 2001 recession that followed the collapse of the dot-com bubble prompted the Fed, led by Chairman Alan Greenspan, to steadily lower the target federal funds rate from 6 percent to 1.75 percent. The Fed kept the rate low and in the

summer of 2003 lowered it still further ñ to 1 percent, its lowest level in 50 years. The low federal funds rate in turn led to rate reductions across the board, including the rates for loans and home mortgages. These reduction fuelled the borrowing binge that caused real estate prices to spiral upward.

Mortgage rate hit a 50 years low of just over 5 percent in 2003, and borrowing to finance home purchases consequently skyrocketed. There was also a second, less well understood, channel through which low rates contributed to the housing bubble. To understand it, must keep in mind that while low interest rates are attractive to borrowers, they are decidedly unattractive to lenders. Here we are speaking not so much of the commercial banks that are extending mortgages to their customers ñ because the rate they charge, however, low, is always considerably higher than the rate that they must pay to depositors- as of other financial institutions (such as investment banks) or high- net worth individuals who are seeking higher returns on their money. With the repeal of the Glass-Steagall Act provision separating commercial and investment banking, many more financial players were now able to participate in the mortgage market.

In this period, the early twenty-first century, U.S Treasury bonds of all types were paying very low rates, and stocks were still not performing well on account of the bursting of the dot-com bubble. Financial investors who had grown accustomed to the much higher returns on their money that were available in previous decades were therefore struggling to find more profitable ways to invest their money. Meanwhile, a rapidly growing number of prospective homebuyers were seeking mortgage at favourable rates. Traditionally, home mortgages involved only the borrower, on one side and the bank that provided the funds, on the other, but this was to change, as investment banks now saw a unique opportunity to meet both investor and homebuyer interests with a single financial product: a mortgage-backed security (MBS).

A mortgage-backed security is a bundle of independently issued home mortgages that an investor may buy in order to obtain a share of the mortgage interest payments, you could think of it as something like a mutual fund, but containing mortgages instead of stocks or government bonds. The investor also takes on the default risk from the individual mortgage that make up the MBS- that is, the risk that the homebuyers might not be able to make their mortgage payments.

Hoskins, Jones & Weiss (2013) pointed out that when making a decision about housing, a house hold must choose between renting and owning a house. They argued that multiple factors such as family financial status and expectation about the future are among the factor that will influence the decision. Furthermore due to the importance of housing in transforming national economies, congress is interest in the condition of the housing finance system for multiple reasons. The mortgage market is very large and can impact the wider U.S economy. The federal government supports homeownership both directly (through the Federal Housing Administration (FHA), Department of Veteransö Affairs (VA), and U.S Department of Agriculture (USDA) and indirectly (through Fannie Mae and Freddie Mac). This support by the federal government means that the government is potentially liable for financial losses. Fannie Mae, Freddie Mac, and FHA currently are in financial difficulty, and Congress has shown an interest in exercising oversight and considering legislation to potential address these difficulties.

Kemeny (1992) studied the relationship between housing wealth, owner occupation and social renting in Britain and other Anglo-Saxon over tenure. The study argues that housing wealth has been a preoccupation of the Anglo-Saxon. Interest in housing wealth was stimulated by rising cost of housing in many countries and the rapid expansion of owner occupation in England during the 1980s, the study argues that it was wrong to equate housing wealth with owner occupation, rather housing wealth is generated by the process of house price inflation which increases the gap between outstanding loan and current market price.

Furthermore, it states that in both social renting and owner occupation the wealth is made use of through the lower housing cost associated with the growing imputed rental value of the dwelling. In both owner occupation and social renting the owner may realise the capital value tied up in the housing through re-mortgaging or through with vacant possession. The main different between these two forms of tenure lies in the fact that capital realisation in owner occupation is exclusively made for private consumption purposes, whereas the wealth accumulated in social rental housing is more flexible because while it, too, can be accessed privately by various measures it can also be easily accessed for satisfying collective consumption needs.

As regard the importance attached to housing finance globally and state allocation of social housing, the proponents of free market economy would therefore argue that the housing

finance market is not completely free. Social housing in one way or the other exert influence on the market, therefore making the market to remain underdeveloped.

The author discussed how owner occupier housing & social housing could be a source of wealth to the individual household, but did not say anything about how housing finance could impact on economic growth of a nation.

Rahman (2009), asserted that the economic benefit of housing is multi-facet. However due to its capital nature only a privilege few has access to housing finance in Bangladesh. Thus the residential housing sector of Bangladesh is characterised by a three-tier market. **First** are those households with the highest disposable income (less than 3% of the housing market), who are able to afford high-quality housing in fully serviced neighbourhoods, and able to utilize bank financing or specialised housing finance institutions. The **Second** tier is the natively narrow stratum of middle-income households (representing 12 to 15% of the housing market), who are the main users of specialised housing financial institutions such as Bangladesh House Building Finance Corporation (BHBFC). This group is the major beneficiary of available public subsidies and is composed predominantly of public servants and wage/salary earners of large private companies and public sector corporations. The **third and largest** of the tiers is low-income households, for which housing is provided largely by the private sector. Often under illegal and unsatisfactory site conditions.

Amonoo, Acquah & Asmah (2003), in their study showed that interest rate is a major factor in the demand for credit. They stated that interest rate and demand for credit has an inverse relationship. The higher the interest rate the lower the demand for credit, and vice versa. The study is based on the theoretical framework of Mckinnon (1973) and show (1973). The Mckinnon ñshaw hypothesis shows that a low real interest rate is a disincentive to savings, thereby reducing the availability of credit. The main policy thrust of the Mkinnon ñshaw hypothesis is that the financial sector should be liberalised for interest rate to be determined by the interplay of demand and supply. In the process, nominal and real interest rate will increase savings mobilization.

While, the authors did not specifically discuss the determinant of housing finance credit, their assertion of the influence of interest rate on demand for credit is relevant in explaining what is obtainable in the mortgage market in most Africa economies. For instance, in Nigeria and other Africa economies, Deposit money banks are unwilling to grant credit to the housing

sector, due to the low interest rate prevailing in the housing finance market. It is considered that the interest rate in the housing finance market is below the ruling commercial interest rate in the market economy. The Deposit Money banks prefer to lend to other sectors of the economy where they can obtain higher interest rate than the mortgage sector where interest rate is regulated.

Similarly, Putkuri (2010) argues that mortgage lending rate in Finland is determined by bank lending rate. The bank lending rate is a function of five factors: Market interest rate level, (2) banks operating costs (3) credit risk faced by the banks, (4) banks market power and (5) banks' minimum, capital requirements.

Furthermore, the euro area is generally considered as an example of a bank-based financial system. While Finland stands out with roughly 90% of outstanding loans to the public being tied to variable rates. Moreover, as to housing finance, close to 95% housing loans in Finland have variable interest rates and they are for the most part granted to domestic deposit banks.

According to the author the liberalization of housing interest loan made housing loan accessible. Thereby enabling the housing finance market to contribute maximally to the economic growth of Finland.

Giddings (2007), examines housing challenges and opportunities in Sub-Saharan Africa. He opined that housing is a key component of urban development. Improved housing is not only a desirable goal in its own right, but it also contributes to economic growth, social development, improved governance and enhanced security and stability. Housing construction and upgrading are major sources of employment, particularly for the unskilled poor. Improved housing and urban services can also have a major impact on the health of the urban poor. They can play a constructive role in the strengthening and spread of community. Civic, and democratic values, which in turn enhance social stability and personal security. Failure to deal with housing issues will lead to the continued growth of slums and poorly serviced informal settlements on the urban periphery. Already, between 75% and 99% of urban residents in many African cities live in squalid slums of ramshackle housing.

Thus it could be argued that the efforts of African governments and international donors have barely impacted the need for new and improved housing and for essential urban services, particularly for low and moderate income families. Very little new housing is actually being built or improved by the formal sector. Most Africans continue to build housing

incrementally through the unregulated informal sector as their financial circumstances permit. With the exception of South African, formal sector housing programs have mostly targeted middle and upper income families.

Encouragingly, with the return of macro-economic stability to many countries in Africa, the overall climate for a rapid increase in housing production through the private sector is not more favourable than it has been in many years. There are also positive indications that housing is gaining importance both as a policy issue and as a tool for economic growth. A number of Africa countries are tackling important legal and regulatory constraints that have traditionally restrained private sector housing production. Other major constraints to the production of housing *à scale* in Africa are: the unavailability of reasonably *ñ* priced, well-located serviced land; the lack of financing for essential urban infrastructure; and the increasing cost of building materials. Surprisingly, the availability of resources for mortgage lending is not generally seen as a major impediment since the liquidity situation of many financial institutions has improved over the past several years. Housing finance institutions, however, must find new ways *go ódown market* to reach low and moderate income families where the demand and need are the greatest. For many of the poor, financing from micro-credit institution offers the best hope.

Housing and urban infrastructure have generally not been a high priority for international donors. The World Bank has been the largest donor in the sector. The US Agency for International Development (USAID) implement the successful Housing Guarantee (HG) loan program for almost 30 years until it was discontinued in 2000. The key United Nations actor in the sector is UN-HABITAT. However, resources at its disposal remain very modest. The European Union has just launched a new *EU- African Partnership on Infrastructure*, but the focus is on trunk infrastructure, and housing is not a priority. Other multilateral and bilateral donors have loaned or granted negligible amounts for housing and urban infrastructure.

Other than the HG loan program U.S assistance for housing and urban infrastructure in Africa has been decidedly *óunderwhelming*.⁶ USAID has provided some modest support for clean water in African through Global Development Alliances and the Development Credit Authority (DCA). The DCA has also supported several other housing programs in Africa since its creation in 1998. During the past five years, the Overseas Private Investment Corporation (OPIC) has become a much large player in support housing in Africa. Unfortunately, housing slum upgrading and urban infrastructure and management are only

incidentally mentioned in the administration's new Foreign Assistance Framework, the blueprint for programming foreign aid. This reflects the lack of any real priority for this important sector.

Oyalowo (2012), observed that a nation's housing finance policy to make appreciable impact on the economy, the policy should be firmly imbedded in its financial sector. In effect a well-functioning financial system could emerge. The emerging system would have the capacity to promote long-term liability, ability to value properties and to size it in the case of default, inform on the credit worthiness of potential borrowers. In order to achieve macro-economic stability and factor for mobilization of funds for the housing sector there should be well functioning capital market. Furthermore, the vibrancy of a nation's capital market in particular as suppliers of long term capital can also be seen as an indicator of the maturity of its financial system.

Conversely, Shittu (2012), study the relationship between financial inter-mediation and economic growth in Nigeria. He opined that financial intermediation has a positive impact on economic growth in Nigeria. Time series data from 1970- 2010 were used for the analysis while the Augmented Dickey ñ Fuller (ADF) and Phillips- perron test conducted. Descriptive statistic was adopted. The study affirmed an earlier research by King and Levine (1993), which posit that financial intermediation plays the following roles in an economy: Mobilization of savings, evaluating projects monitoring managers, managing risk and facilitating transactions. It concludes that financial intermediation is a veritable tool for economic growth.

US HUD (2011), in a report to congress, the US Housing and urban Development (HUD) recommended for reaching, reforms in the American Housing Finance Market. The report was occasioned by the aftermath of the global financial crisis, in which the US economy loss billions of dollars. Housing finance market has always been a grate contributor to the growth of the American economy hence the government always give adequate attention to what happens in the mortgage market.

After the Great Depression of the 1930s the federal government established two financial institutions to help American recover from the effects of the depression. The institution are (1) Federal National Mortgage Association (Fannie Mae) and (2) Federal Home Loan mortgage corporation (Freddie Mac). Thus HUD (2011) puts it as follows: Improving

how housing was financed was an important part of these broader Depression ñ era reforms. In the 1930s, following server mortgage market disruptions. Widespread foreclosures, and sinking homeownership rates, the government created the Federal Housing Administration (óFHAô), Fannie Mae, the Federal Home Loan Banks (óFHLBsô) and, several decades later, Freddie Mac to help promote secure and sustainable homeownership for future generations of Americans.

Fannie Mae and Freddie Mac held true to their original mission for many years. They established appropriate benchmarks for conforming loans that drove improved standards within the broader mortgage industry. They helped reduce rates for borrowers by bringing transparency and standardization to the housing finance market.

It could be observed from the above that the US government directly participated in the provision of housing for her citizens through the established institutions from the 1930s to the period of the global financial crisis. However after the financial crises of 2007 to 2009, the Housing and Urban Development authority recommended a shift in government policy from direct participation in housing provision to a market based. They argued as follows: under our plan, private markets ñ subject to strong oversight and standards for consumer and investor protection- will be the primary source of mortgage credit and bear the burden for losses., Banks and other financial institutions will be required to hold more capital to withstand future recessions or significant declines in home prices, and adhere to more conservative underwriting standards that require homeowners to hold more equity in their homes.

2.6.2 Housing Finance Market and Economic Growth in Africa

Venter (2010), argued that there were housing policies that were adopted in the developed economics, including Western Europe. The policies have elevated the growth of those economies, if same policies is replicated in Africa it will as well achieve the same result by transforming African economies positively. According to her these policies involves limited state participation in provision of housing to a greater market involvement.

The role of the World Bank in housing finance in Africa is also worthy of note. Venter (2010) puts it thus, the involvement of the World Bank in Africa commenced in the mid-1960s. The World Bank original intention was to invest in infrastructure development and housing received little attention. However, when the World Bank entered the housing field in 1972, it became the highly influential in setting the stage for housing policy directions in developing countries. The World Bank adopted neo-liberal principles in its policy guideline for the

developing countries. Gives the limited success of public state provided housing in developing countries, governments shifted their focus to sites and-services housing projects as proposed by the World Bank (Pugh, 2001). Site and service projects, in line with neo-liberal principles, are based on economic aspect such as affordability, cost-recovery and replicability (World Bank, 1993). During the 1980s the World Bank Actively promoted the idea of limited state involvement and advocated for greater market involvement. This phase was characterised by an evolvment of governance based, providing state principles to governance based on enabling state principles. According to enabling state principles, the World Bank recommends that governments assist with the provision of institutional mechanisms to enable housing markets to work more efficiently (World Bank, 1993). In principle, as advocated by the World Bank, the South Africa housing policy favours a neo-liberal, market driven housing approach with the role of the state reduced to being facilitative

Doling, Vandenberg & Tulentino (2013), positsthat housing has a significant impact on funds intermediated by financial institutions. At the same time housing plays very important role in the growth of the real economy through its impact on the other sectors of the economy. They observed that construction gives rise to demand for building materials, labour and professional services associated real estate market such as service of engineers, lawyers, brokers and artisans.

Furthermore they argued that the creation of more and better quality housing has impacts on the economy and the welfare of the households. They argued that the impact of living in a decent house to the household should include: health and human welfare, social and political stability, and aspect of social security. While the benefits to the economy include: construction multiplier, employment generation and impact on small business.

The authors however pointed out that, many claims about the impacts of housing improvements have not been subjected to vigorous and extensive empirical testing. They adduced the following reasons for their line of argument: First, some results on political development effect of increased homeownership can reflect ideological bias secondly, studies on a specific country as aspect of the housing market cannot necessary be generalised to other countries or other aspects of housing. Thirdly, much of the existing literature does not demonstrate cause and effect, but rather correlation.

The researcher did not share this view adduced by these authors. There are several empirical studies that showed the impact of housing on the lives of the occupants and on the economy. In the first instance, these authors appears to be contradicting themselves when they said a key impact of better housing is the improved health of occupants. This link is obvious as the healthiness of a household's environment will be determined in no small manner by housing, along with housing-related infrastructure such as water and sanitation.

Another study in support of quality of housing and health/economic growth puts it thus: The link between the quality of housing and human health is not a new one. Workers in the industrial towns of 19th century Britain, for example, experienced high rates of disease, such as tuberculosis, cholera, and typhus. The response in the form of various Public Health acts established higher standards of housing quality, along with improvements in sanitation infrastructure such as sewerage and water supply, which proved effective in reducing disease, it is well established that healthier workers are more productive, benefiting not only the workers themselves, but also raising productivity of their employers and the broader economy (Pooley 1992).

Also Thomson & Pettigrew (2005) asserted that the links between poor housing and poor health are well established. Many, possibly hundreds, of cross- sectional studies have reported consistent and statistically significant associations between poor housing conditions and poor health.

Similarly, Thomson, Pettigrew & Morrison (2001), found that improvements in housing quality can lead to an increased sense of belonging or involvement in the community, which can increase life satisfaction and thereby enhance mental and physical health.

Okpala, Mutizwa- Mangiza & Moisseev (2006), posits that the problem with developing countries is the rapid growth in population without a corresponding growth in housing, social services, such as water supply, sanitation and other services needed by urban dwellers. These challenges has led to wide spread poverty and inequality in urban centres with millions of people living in slums without adequate facilities. The survey focus mainly on Asia. The findings showed that most of the urban population growth within the next twenty five years will occur in East and South Asia, especially in china and India. They concluded that many places around the, mostly Asia and Africa will experience urbanization of poverty and inequality between the rich and the poor. Finally, they argued that by the year 2030, about 2.825 billion people will need housing which will translate into 877 million housing units.

These infrastructures need financing, which will in turn lead to accelerated economic growth in the affected economies.

Likewise Nasr & Abbdelkader (2012), examined the shelter challenge and the mortgage market in Egypt. The problem of the study was Egypt Housing Dilemma. There has been a persistent gap in Egypt between incomes and the cost of new housing even at the middle income level. It is estimated that around 200,000 new housing units are needed annually to keep pace with household formation, but only the top 10 to 20 percent of the income distribution can afford to acquire a formally recognized house. To help improve access to formal home ownership by low and middle income households the government has in the past provided a range of subsidies, through numerous special programs. Many of these public housing schemes involved large government subsidies.

They assert that prior to the housing reforms, Egypt suffered from a severely undeveloped housing finance system. The banking sector offered very little formal housing finance to household although a few commercial banks have made a limited amount of loans to homebuyers, mostly as part of their retail activities or of their lending to developers, by using collateral other than mortgage pledges. A few developers have also been providing term financing under a system, of deferred instalment sale contracts, but these have not offered secure or favourable conditions for borrowers. Housing affordability was not improved because loan maturities were too short. Banks were reluctant to extend mortgage loans for two main reasons: (i) the maturity mismatch between their short term deposits and long term mortgage loans; and (ii) the lack of registered titles. At the non- banking front, only two mortgage companies were created who engaged in small amounts of lending due to lack of long term funds. Among their findings where a shift in government policy of providing public housing to providing enabling environment for, a modern mortgage market to tribe (Market based).

Omotoso (2011), looked at mortgage banking/housing finance in Nigeria from historical perspective. The author identified the inability of the Nigerian government to address the issue of long term funding for housing development 50 years after independence as a major problem. Another problem was the low percentage rate contribution of housing finance GDP. At present the housing finance market contribute only 38 percent, when compared to other countries such as Malagsia and South Africa with an annual average of 40 percent to GDP. The findings showed that Nigeria had a hug housing unitsö deficit which will require the

production of a minimum of 720,000 housing units annually for the next 20 years in order to close the housing gap in the country. Other findings includes: Inadequate capital base of Primary Mortgage Banks and Federal Mortgage Bank of Nigeria, difficulty in accessing land and security little to land due to the land use Act of 1979, high cost of building materials among others. Conclusion/recommendations were made as follows; removal of the land use Act 1979 from the constitution of the Federal Republic of Nigeria, reduction in the cost of perfection of title to land, an institutional arrangement for the mortgage banks to be listed in the capital market and the establishment of Mortgage liquidity facility (MLF).

Mata (2011) in a study on housing in Nigeria identified the following constrains as factors militating against a robust housing system: not much is known about housing in Nigeria, there is a dearth for data, there is limited research efforts on housing related issues, especially housing finance system, most of the data are budgetary allocations and spending on housing related issues. Lack of cohesive/integrated housing programme and Lack of access to finance. A survey method was adopted in the study and the findings were, housing is an important contribution to GDP, it is a tool for the reduction of poverty, it creates jobs while at the same time stimulate construction work and entrepreneurial development. Others include Capacity to stimulate and expand financial sector development, Absence of a coherent private financial institutional arrangement to address housing finance, Lack of availability to finance for rental housing.

The study concludes that there is need to reform the sector through enactment of appropriate policy guidelines, properly rights, and development finance.

Aye, Balcilar, Bosch & Gupta (2013), carried out a study on housing and the business cycle in South Africa. The paper analyse whether the growth rates of real house price, real residential investment and number of building plans passed, affect economic growth over the phases of the business cycle in South Africa. The Granger causality test was adopted in the study. The findings showed that using the Phillip (1987 and Philips and Perron (1988) (PP) unit root test authors examine the stationarity of the series. We report results for intercept, as well as intercept and trend. The critical value refers to the Mackinnon (1996) criteria. The null hypothesis of non- stationarity for GDP, HP, GCFC and NUM cannot be rejected at the 5 percent significance level. They concluded that there is no long run relationship between GDP and any of the housing variables studied.

2.7 SUMMARY OF REVIEW EMPIRICAL LITERATURE (THE GAP THESES)

Several studies, both internationally and locally have been carried on the impact of housing finance market/mortgage financing on growth of GDP. Below is a summary of previous empirical studies reviewed. The author(s), location, objective, methodology and findings of these works is presented in a table below.

Table 1 **Summary of some previous Empirical Studies on Impact of Housing Finance on Economic Growth**

Author (s)	Sample	Objectives	Methodology	Result
Oyalowo (2012)	West Africa	To determine the constraints limiting lending institutions participation in housing finance supply in the West African region	Classical Linear Regression Model	Positive
International Monetary fund (2011a)	USA	To determine the relationship between mortgage credit growth and economic growth	Pooled cross ñ section/time series data	Positive
International monetary fund (2011b)	USA	An examination of the impact of the financial crises on the US economy.	Case-Shiller housing price index	Negative
Hoskins Jones, & Weiss (2013)	USA	To provide an overview of how housing finance system works and provides context for housing finance related policy issues that congress might choose to considers	Qualitative method	Positive
Kemeny (1992)	Sweden	An analysis of factors influencing household choice between owning or renting a house, and a distinction between free market and the social structure	Qualitative	Neutral and inclusive evidence
Radman (2009)	Bangladesh	Access to housing finance in Bangladesh evaluate contribution of housing finance to economic	OLS	Positive

		growth of Bangladesh		
National Housing Bank, India (2012)	India	Examine the relationship between housing finance, shelter, job and growth	Diagram	Positive
OECD (2011)	OECD	Investigation how housing policy should be designed to ensure adequate housing supply to use housing as a tool for economic growth	Correlation	Neutral
Gabaix, Krishnamurthy & Vigneron (2007)	USA	Examination of mortgage backed security market	Linear regression model security's option adjusted spread (OAS)	Negative
Doling, Vandenberg & Tolentino (2013)	Asia	To review the relationship between housing finance and capital market ñrelationship between mortgage market and household savings	Descriptive	Positive
Putkuri (2010)	Finland	Examine how housing loan rates are determine	Monti-Klein model	Positive
Machek & Machek (2014)	Czed Republic	Analysis of factors of business growth	Sales growth estimation model	Negative
Buist & Yang (2000)	USA	Determinant of mortgage finance and demand for housing	OLS three-stage least squares Johansen trace-statistic Co-integration test	Positive
US HUD (2011)	USA	To reform America's housing finance market	Qualitative	

Mohammed & Ehikioya (2015)	Nigeria	Examines macroeconomics determinants of economic growth in Nigeria	Augmented Dickey-fuller (ADF) Co-integration	Neutral
Gupta, Guha & Krishnaswami (2013)	India	An evaluation of firm growth and its determinants	Theory	Neutral
Steggell, Yamamoto, Bryant & Fidzani (2006)	USA	To quantify the use of theory in housing research describe how theory has been used	Quantitative content analysis techniques explicit theory	Negative
Fuente (2000)	Bracelona	Expository on convergence and divergence mechanisms	Convergence theory	Positive
Mkandawire (2013)	Stockholm	Examination of why African countries remain poor, compare to other countries.	Correlation theory	Negative
Shittu (2012)	Nigeria	Evaluation of impact of financial intermediation economic growth in Nigeria	Unit root test on co-integration test	Positive
Giddings (2007)	USA	Examines the constraints to housing and housing finance development in Africa.	Qualitative	Positive
Rust (2011)	South African	Analyse the challenges of affordable housing finance in African	Descriptive statistics	Neutral and inconclusive
Hassler (2011)	Middle East North Africa	Investigation of housing market and credit interactions in middle East and North Africa Countries	Descriptive Statistics	Positive
Amonoo, Acquah & Asmah (2003)	Ghana	To determine Whether there is a relationship between interest rate and the demand for credit, as well as interest rate and loan	Logit and probit model (OSL)	Negative

		repayment by the Poor		
Bank of Ghana (2007)	Ghana	To determine housing conditions and the underlying causes of the sustained rise in property prices	Description statistics	Positive

Source: Author's Computation from various Empirical Literatures reviewed.

While there are a lot of work done in the area of housing finance market, most of the studies were done in the developed economies, using data from developed countries. It could be argued that apart from the work of Badeu, Beck, Vado & Walley (2014) and few others, there is no across countries study even in the developed world. Most of the studies were limited to individual country. In Africa with the dearth of data and the under development of the housing finance market, no extensive research has been carried out on the impact of mortgage finance on economic growth to the best of our knowledge. Also there is no known across countries study on Egypt, Nigeria and South Africa to us. These are the knowledge gaps which the researcher intend to fill.

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CHAPTER THREE

METHODOLOGY

3.1 INTRODUCTION

In this chapter, the procedures, method and techniques used by the researcher in carrying out the study is described. The research design contains nature and sources of data, population, sample size and method of data analysis. In addition, this chapter essentially contains model specification as well as description of the variables of interest. The chapter creates a backdrop against which analyses of data as well as drawing of conclusion are made.

3.2 RESEARCH DESIGN

This study would follow the empirical line in scientific research as it seeks to address a particular research issue using empirical observation and methods. In this study the descriptive and *ex post facto* method was adopted. This method is considered adequate and suitable because the researcher collected existing data over a period of time.

Onwumere (2009) describes the steps involved in this type of research to include observation of events, identification of relevant variables, theoretical explanation of phenomena, experimental investigation and inferencing or deductions, ultimately based on observation, reasoning and logical analyses. This work will follow the above steps to establish facts and make deductions based on the relationship among the variables of interest.

The *ex post facto* research method is common and considered as an ideal method in conducting research in business and social sciences. It is mostly used when it is not possible or acceptance to manipulate the characteristics of the variables under study. Simon and Goes (2013) sees *ex post facto* research as one which is based on a fact or even that has already happened and at the same time employs the investigation and basic logic of enquiry like the experimental method. One of the main reasons for the adoption of *ex post facto* in this study is that the reported figures/ proxies for the variables housing finance are not subject to manipulation of the author because they are information of public nature which are variable.

Another strong reason that favours the *ex post facto* research method is the fact that it blends the benefits of hindsight with those of experiments and deductions. The method is described as an experimental research in reverse order Cohen, Manion and Morrison (2000). The data sets as built over time were not research-focused but represent records of event. The use of *ex post facto* method allows for investigation and application of logic of inquiry in a reverse order. This is done by establishing a causal relationship among the variables under study while explaining consequence based on antecedent conditions Kerlinger and Rint (1986). The

research design is causal in nature. The method tries to establish a cause and effect relationship between housing finance and economic growth.

As this type of research design demands, theoretical models are established which forms the bases for studying the cause and effect relationship among the variables of interest. Brooks (2014) is of the view that in a causal relationship study or analyses, research questions are transformed into a theoretical mode, consisting of theoretical constructs, causal relationships and observed variables. The theoretical model is generally developed based on the analysed or reviewed literature and the observed variables are fitted in to help confirm or refute the hypothesized causal relationship. This represents the design for this work. A model based on the theoretical. A model based on the Gujarati and porter hypothesis will be built, observed housing finance markets in Egypt, Nigeria and South African will be tested to determine their impact on the various economics. The study will also compare the three economies to determine the level of positive and significant impact of housing finance. Given the importance of interest rate in money supply in the economic system, the relationship between interest rate and the mortgage market will be determined.

3.3 SOURCE AND NATURE OF DATA

The issue of data is at the very center of research and also the nature of data for any study depends entirely on the objectives of the research and the type of research undertaken (Onwumere, 2009). Consistent with the above therefore and in line with conducted in the area of finance, the data for this study were mainly from secondary sources. They were drawn from published works. The bulk of the data were obtained from the African Housing finance year, Central Bank of Egypt statistical bulletin, Central Bank of Nigeria statistical bulletin and South Reserve Bank statistical bulletin. The dataset are also of time series nature given that they have a natural time ordering.

3.4 POPULATION AND SAMPLE SIZE

The focus of this study is economies of African countries. All the member countries of the African Union make up the population of the study.

The study period is 1997 to 2014, representing 18 years period. The data are from African housing finance year book and the Central Bank statistical bulletin of the sample countries. The sample sizes are the country of Burundi, Kenya, Morocco, Namibia and Nigeria. These countries are chosen due to the relative availability of housing finance data. Studies

haseshown that the housing finance market is under developed in most of the African countries. In specific terms, the researcher adopted purposive sampling technique in selecting the countries to represent the five sub-regions of Africa covered in this work.

3.5 MODEL SPECIFICATION

This work is modelled after Oyalowo (2012) who studied Housing market constrains in the West African Region.

The classical linear regression model was adopted in the study which according to Gujarati and Porter (2009) is stated thus:

$$Y = \hat{U}_0 + \hat{U}_1 X_{1t} + \hat{U}_2 X_{2t} + \dots + \hat{U}_n X_{nt} + e_t \quad \text{--- eqn (3.1)}$$

Where Y = Dependent variables

$\hat{U}_0$ = Intercept

$\hat{U}_1, \hat{U}_2, \dots, \hat{U}_n$ = Slope or co-efficients of the parameter estimates

$X_1, X_2, \dots, X_n$ = Independent variables

e = Stochastic error term

The generalized model for this study is written thus:

$$\Delta \text{RGDP} = \hat{U}_0 + \hat{U}_1 \text{HF}_{Kt} + \hat{U}_2 \text{HF}_{Nt} + \hat{U}_3 \text{HF}_{Bt} + \hat{U}_4 \text{HF}_{Mt} + \hat{U}_5 \text{HF}_{Nt} + \hat{U}_6 \text{IR}_t + e_t \quad \text{----- eq(3.2)}$$

Where ΔRGDP = change in Real GDP which is a proxy for economic growth

$\hat{U}_0$ = Intercept

$\hat{U}_1, \hat{U}_2, \hat{U}_3, \hat{U}_4, \hat{U}_5, \hat{U}_6$ = Scope of or co-efficient of the parameter estimates

HF_{Kt} = Housing Finance in Kenya

HF_{Nt} = Housing Finance Nigeria

HF_{Bt} = Housing Finance Burundi

HF_{Mt} = Housing Finance Morocco

HF_{Nt} = Housing Finance Namibia

IR_t = Interest rate

e_t = error term

The model is disaggregated to be able to test all the hypothesis and it will be rewritten thus:

Hypothesis 1 and 2

$$\Delta \text{RGDP}_{Kt} = \hat{U}_0 + \hat{U}_1 \text{MBOHL}_{Kt} + \hat{U}_2 \text{CBOHL}_{Kt} + e_t \quad \text{--- eq 3.3}$$

Hypothesis 3 and 4

$$\Delta \text{RGDP}_{Kt} = \hat{U}_0 + \hat{U}_1 \text{MBOHL}_{Nt} + \hat{U}_2 \text{CBOHL}_{Nt} + e_t \quad \text{eq 3.4}$$

Hypothesis 5

$$\Delta \text{RGDP}_{Kt} = \hat{U}_0 + \hat{U}_1 \text{TOHL}_{Bt} + \hat{U}_2 \text{LINTR}_{Bt} + e_t \quad \text{eq 3.5}$$

Hypothesis 6

$$\Delta \text{RGDP}_{Mt} = \hat{U}_0 + \hat{U}_1 \text{TOHL}_{Mt} + \hat{U}_2 \text{LINTR}_{Mt} + e_t \quad \text{eq 3.6}$$

Hypothesis 7

$$\Delta \text{RGDP}_{Nt} = \hat{U}_0 + \hat{U}_1 \text{TOHL}_{Nt} + \hat{U}_2 \text{LINTR}_{Nt} + e_t \quad \text{eq 3.7}$$

Where ΔRGDP_t = change in Real GDP which is a proxy for economic growth

$\hat{U}_0$ = Intercept

$\hat{U}_1, \hat{U}_2, \hat{U}_3$ = Scope of or co-efficient of the parameter estimates

MBOHL_{Kt} = Mortgage Banks Outstanding Housing Loans in Kenya

CBOHL_{Kt} = Commercial Banks Outstanding Housing Loans in Kenya

MBOHL_{Nt} = Mortgage Banks Outstanding Housing Loans in Nigeria

CBOHL_{Nt} = Commercial Banks Outstanding Housing Loans in Nigeria

TOHL_{Bt} = Total Outstanding Housing Loans in Burundi

TOHL_{Mt} = Total Outstanding Housing Loans in Morocco

TOHL_{Nt} = Total Outstanding Housing Loans in Namibia

LINTR_{Bt} = Lending Interest Rates in Burundi

LINTR_{Mt} = Lending Interest Rates in Morocco

LINTR_{Nt} = Lending Interest Rates in Namibia

e_t = error term

3.6 DEFINITION OF VARIABLES IN THE MODEL

Interest rate (Deposit Money Bank interest rate) is used as control variables for all the hypotheses 5 to 7. Economic growth which is change in GDP is the Dependent variable for the entire hypothesis.

Housing finance = (The quantum of funding to the mortgage market) proxied by Outstanding mortgage loan, which represents independent variable the entire hypotheses.

The entire hypotheses were tested using the classical linear regression model. Four steps would be followed in the process.

Step 1: Description of data and standard test on the data

- Step II: Application of the classical linear regression model
- Step III Conducting of diagnostic tests to validate the results
- Step IV Decision making with emphasis the null hypothesis.

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CHAPTER FOUR

PRESENTATION OF DATA AND ANALYSIS OF DATA

4.1 INTRODUCTION

In this chapter the study presents the data collected from World Bank Human Development Indicator for the various countries selected and the central banks of the sampled economies. The countries are Burundi, representing central African region, Kenya, representing East African region while Morocco, represents North African region. Others are Namibia which represents Southern African and Nigeria which represent West Africa region. Other sources include Centre for Affordable Housing in Africa year books, 2012, 2013 and 2015.

Also very useful data on housing finance on different countries in Africa were collated from HOFINET web site, Burundi central Bank quarterly bulleting and central Bank of Nigeria statistical bulletin. The data were collated in line with the objectives of the study for the period under study 1997 to 2014. The data were presented in five tables, representing the five regions of Africa covered by this work. Each table contain a summary of data representing the variables under study for the sample economy selected for each region. The choice of each country is based on the availability of data.

Also the formulated hypotheses were tested against the backdrop of the formulated models. Conclusions were drawn based on the outcome of the result of the tested hypotheses. Descriptive statistics and stationarity test were used to further complement the results obtained.

4.2 DATA PRESENTATION AND INTERPRETATION

Given the objectives and models of the study, the data are presented accordingly. The quantum of data used to test the hypotheses are presented in table 4.1 through 4.5, it covers the five economies under study. Data from Kenya and Nigeria are disaggregated according to their contribution to housing finance market in the different countries. Outstanding mortgage loans by Commercial Banks were stated side by side with outstanding Mortgage loans by Mortgage Banks in the two countries. Datasets obtained from Burundi, Morocco and Namibia were aggregated. Efforts to separate the data of outstanding loans by commercial Banks and Mortgage Banks were unsuccessful; hence the aggregate figures were used for these three countries.

TABLE 4.1: KENYA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (BILLIONS OFSHILLINGS) 1997 to 2014

YEAR	TOL	TOCBL	CBOHL	MBOHL	TOHL	GDP	THLPTL	THLPGDP
1997	258577.0	258577	18896	NA	18896.000	690268	7.307688	2.737487
1998	291972.0	291972	22562	NA	22562.000	755827	7.727453	2.985075
1999	319453.0	319453	28277	NA	28277.000	804994	8.851693	3.512697
2000	333960.0	333960	26751	NA	26751.000	858919	8.010241	3.114496
2001	348185.0	348185	25280	NA	25280.000	912770	7.260508	2.769591
2002	373813.0	373813	24936	NA	24936.000	922304	6.670715	2.703664
2003	423425.0	423425	24650	NA	24650.000	1016195	5.821574	2.425716
2004	470790.2	464198	26706	6592.249	33298.249	1141812	7.072842	2.916264
2005	516453.3	510000	39503	6453.285	45956.285	1261628	8.898440	3.642618
2006	597941.0	591586	47497	6355.032	53852.032	1444114	9.006245	3.729071
2007	697486.9	689728	60468	7758.910	68226.910	1616012	9.781819	4.221931
2008	815059.8	804625	51687	10434.788	62121.788	1858372	7.621746	3.342807
2009	987182.3	972667	68126	14515.338	82641.338	2099935	8.371436	3.935424
2010	1269808.	1250284	111565	19523.530	131088.530	2258169	10.32350	5.805081
2011	1473390.	1448147	162437	25242.966	187679.966	2696225	12.73797	6.960842
2012	1756113.	1725377	200175	30735.766	230910.766	3026293	13.14897	7.630152
2013	2045528.	2010194	233100	35333.719	268433.719	4252646	13.12296	6.312158
2014	2465090.	2419532	299084	45557.886	344641.886	4837338	13.98091	7.124619

Sources:

Central Bank of Kenya - Statistical Bulletin 2005, 2013 and 2014.

The World Bank: <http://data.worldbank.org>

Centre for Affordable Housing Finance in Africa - Africa Housing Finance Yearbook 2012 and 2013

Housing Finance Group Annual Reports (various years).

WHERE: TOL -Total Outstanding Loans

TOCBHL - Total Outstanding Commercial Banks Loans

CBOHL - Commercial Banks Outstanding Housing Loans

MBOHL - Mortgage Banks Outstanding Housing Loans

TOHL - Total Outstanding Housing Loans

GDP - Gross Domestic Product

THLPTL - Total Housing Loans as Percentage of Total Loans

THLPGDP - Total Housing Loans as Percentage of GDP

Kenya has one of the most vibrant and developed housing finance market by African standard. Table 4.1 presents data for objectives one and two, which concerned one of the challenges of the market which is availability of data. While the study period was 30 years (1985-2014), data were available for 18 years only(1997-2014). This is an indication that the market is under-developed by global standard and relatively new. As at the end of 2014,

Kenya had 44 banking institutions (43 commercial banks and 1 mortgage finance company). The mortgage finance company commenced operation in 1996, which is an indication of the newness of the market. Both the mortgage finance company and the commercial banks grant mortgage loans as shown on table 4.1.

TABLE 4.2: NIGERIA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (N-BILLIONS) 1985 - 2014

YEARS	TOL	TOCBL	CBOHL	MOHL	TOHL	GDP	THLPTL	THLPGDP
1997	386.2885	385.5505	0.000000	0.738000	0.738000	4189.250	0.191049	0.017617
1998	273.6814	272.8955	0.000000	0.785900	0.785900	3989.450	0.287159	0.019699
1999	323.6891	322.7649	0.000000	0.924200	0.924200	4679.212	0.285521	0.019751
2000	509.1573	508.3022	0.000000	0.855050	0.855050	6713.575	0.167934	0.012736
2001	797.1894	796.1648	0.000000	1.024646	1.024646	6895.198	0.128532	0.014860
2002	961.2294	954.6288	0.000000	6.600618	6.600618	7795.758	0.686685	0.084669
2003	1222.929	1210.033	0.000000	12.89556	12.89556	9913.518	1.054481	0.130081
2004	1525.243	1519.243	0.000000	6.000000	6.000000	11411.07	0.393380	0.052581
2005	1978.811	1976.711	0.000000	2.100000	2.100000	14610.88	0.106124	0.014373
2006	2531.858	2524.298	0.000000	7.560000	7.560000	18564.59	0.298595	0.040723
2007	4854.248	4813.489	0.000000	40.75940	40.75940	20657.32	0.839665	0.197312
2008	7907.932	7799.400	466.8007	108.5315	575.3322	24296.33	7.275382	2.367980
2009	9030.730	8912.143	778.1404	118.5869	896.7273	24794.24	9.929733	3.616676
2010	7839.307	7706.430	670.3048	132.8761	803.1809	33984.75	10.24556	2.363357
2011	7435.539	7312.726	453.5036	122.8128	576.3164	37409.86	7.750836	1.540547
2012	8270.936	8150.030	539.7598	120.9054	660.6652	40544.10	7.987792	1.629498
2013	10137.89	10005.59	726.9216	132.2917	859.2133	42396.77	8.475271	2.026601
2014	12937.10	12889.42	556.1929	47.68000	603.8729	44507.88	4.667760	1.356777

Sources: 2014 Monthly Bulletin

Central Bank of Nigeria - Statistical Bulletin 2014

The World Bank: <http://data.worldbank.org>

Centre for Affordable Housing Finance in Africa-Africa Housing Finance Yearbook 2012, 2013 and 2015

The data presented on table 4.2 are total outstanding loans and the component for the housing sector in Nigeria. These loans are presented in billion of Naira. Data were sourced mainly from central bank of Nigeria statistical bulletin. Similarly, GDP was sourced from Central Bank of Nigeria statistical bulletin. Data on table 4.2 showed that mortgage banks started reporting their financial transactions from 1992, even though mortgage banking started in Nigeria in 1977. Data were available from 1992 to 2014, a period of 23 years out of 30 years (1985-2014) which is the study period.

The table further revealed that in 1992 the mortgage banks outstanding housing loans amounted to 0.2089006 billion Naira which translate to 0.49 percent of total outstanding loans and 0.024 percent of GDP respectively. From available data on table 4.2, it could be argued that commercial banks are the major participants in the housing finance market in

Nigeria. Also the share of outstanding mortgage loans by commercial banks appears to be very small when compared to total outstanding loan as shown on column 4, table 4.2. Column 4 (CBOHL) revealed that out of 30 years under study, commercial banks did not lend to the housing sector for a period of fourteen (14) years (1994- 2007).

For the period 1985 ñ 1993 and 2008 ñ 2014, which amounted to sixteen (16) years out of the thirty (30) years study period, commercial banks participated in the housing finance market. During this period housing finance contribution to GDP average 1.68percent; a figure too small when compared to other African nations with a robust mortgage finance markets.

TABLE 4.3: BURUNDI- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (US \$-MILLIONS) 1985 – 2014

YEAR	TOL	TOHL	GDPPRICE	LINTR	THLPTL	THLPGDP
1997	NA	NA	972.8963	NA	NA	NA
1998	NA	NA	893.7708	NA	NA	NA
1999	NA	NA	808.0772	15.23583	NA	NA
2000	NA	NA	870.0000	15.77000	NA	NA
2001	NA	NA	877.0000	16.82417	NA	NA
2002	188.5287	7.56	825.0000	19.46750	4.010000	0.920000
2003	204.6703	7.45	785.0000	18.23083	3.640000	0.950000
2004	232.7402	6.54	915.0000	18.25417	2.810000	0.710000
2005	282.7839	7.72	1117.000	18.44500	2.730000	0.690000
2006	372.8625	10.03	1273.000	17.07250	2.690000	0.790000
2007	312.3596	11.12	1356.000	16.84333	3.560000	0.820000
2008	305.6641	15.65	1612.000	16.52083	5.120000	0.970000
2009	404.6018	22.86	1775.000	14.07583	5.650000	1.310000
2010	508.4967	31.12	2032.000	12.42000	6.120000	1.540000
2011	576.4321	35.22	2371.000	13.23250	6.110000	1.500000
2012	570.8754	33.91	2510.000	14.32000	5.940000	1.370000
2013	453.8686	31.09	2723.000	15.14750	6.850000	1.160000
2014	529.2300	46.46	3094.000	15.66833	8.778792	1.501616

Sources:

Bank of The Republic of Burundi (2014) monthly bulletin:

http://www.brb.bi/se/rap_anuel.html

HOFINET - Housing Finance Information Network: <http://hofinet.org>

The World Bank: <http://data.worldbank.org>

Centre for Affordable Housing Finance in Africa - Africa Housing Finance Yearbook 2012, 2013 and 2015

Some of the challenges confronting housing finance market in Burundi are under development and young age of the market. The study period is 30 years but data available from table 4.3 is for 13 year (2002- 2014) only. This is an indication that the market is relatively new and under developed.

Data on table 4.3 were sourced from different sources. Total loans outstanding in US dollar in millions was computed by the author from total housing loans outstanding in US dollar in

millions and housing loans as a percentage of total loans and GDP at current market price in US dollar in million, for the years 1985- 1999 were sourced from world bank data base, while GDP at current market price in US dollar for the years 2000 ñ 2014 were obtained from Hofinet (Housing Finance Network). In the same vain, housing loan as percentage of total loan, housing loan as percentage of GDP and total housing loan outstanding were all obtained from Hofinet.

Data on table 4.3 revealed that the contribution of housing finance to economic growth in Burundi has been insignificant. From 2002 to 2008, the contribution was below 1 percent each year, and in 2009, it increased to 1.37 percent, with a further increase to 1.54 percent in 2010. In 2011 the impact of housing finance on economic growth of Burundi fell to 1.5 percent and further fell to 1.37 percent in 2012. While in 2013 the percentage was as low as 1.16 percent with a slight increase to 1.5 percent in 2014.

TABLE 4.4: MOROCCO- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (US \$-MILLIONS) 1985 - 2014

YEARS	TOL	TOHL	GDPPRICE	LINTR	THLPTL	THLPGDP
1997	NA	NA	37263.57	11.7500	NA	NA
1998	NA	NA	40021.76	13.5000	NA	NA
1999	NA	NA	39734.10	13.5000	NA	NA
2000	NA	NA	37022.00	13.3125	NA	NA
2001	17726.46	2605.79	37725.00	13.2500	14.70	7.58
2002	20711.81	3210.33	40418.00	13.1250	15.50	7.94
2003	25599.11	4300.65	49823.00	12.5625	16.80	9.02
2004	29380.72	5288.53	56948.00	11.5000	18.00	9.58
2005	29211.38	5696.22	59524.00	11.5000	19.50	9.50
2006	38555.15	7865.25	65640.00	12.9000	20.40	12.33
2007	55118.95	11023.79	75223.00	NA	20.00	14.65
2008	64879.57	12067.60	88879.00	14.1700	18.60	13.58
2009	73535.21	13971.69	90907.00	14.1700	19.00	15.37
2010	74528.39	14831.15	90771.00	14.4000	19.90	15.84
2011	79955.05	15991.01	99211.00	14.1400	20.00	15.14
2012	85433.92	17855.69	96130.00	14.1900	20.90	18.54
2013	91795.42	19644.22	104799.0	14.3000	21.40	18.74
2014	115029.7	18807.36	111744.0	14.3900	16.35	16.83

Sources:

Bank Al-Maghrib - Breakdown of Bank Credit by economic purpose (various years)

HOFINET - Housing Finance Information Network: <http://hofinet.org>

The World Bank: <http://data.worldbank.org>

Centre for Affordable Housing Finance in Africa - Africa Housing Finance Yearbook 2012 and 2013

2006 - 2014 Lending rates culled from Bank Al-Maghrib website www.bkam.ma

One of the main constraints of housing finance market in Morocco is the absence of central data bank. Conversely data on table 4.4 were sourced from different sources as follows:

1. Total outstanding loans in millionsof US dollars was computed by the author from total outstanding housing loans and housing loans as a percentage of total loan.
2. GDP at Current market prices in US dollars for the years 1985 ñ 1999 were obtained from World Bank data Base. While GDP at current market price in US dollar for the years 2000-2014 were obtained from HOFINET data bank.
3. Similarly, lending interest rates were obtained from Central Bank of Morocco i.e. Bank Al-Maghrib website
4. In like manner, housing loan as percentage of total loan, housing loan as a percentage of GDP and total outstanding housing loan were all sourced from HOFINET organization website.

According to CAHF (2015), Morocco has the most advanced housing finance market in North Africa region. However by international rating, the Moroccan market could be described as an emerging market. Furthermore, judging by availability of data which covered only the period 2001 to 2014, it could be argued that even though the Moroccan housing finance market appeared vibrant, it is still at infancy stage.

In 2001, the housing finance sector contributed 7.58 percent to economic growth of Morocco. This level of performance could be regarded as insignificant when compared to the United States where about 70 percent of municipal council income comes from the housing sector. Giving the level of housing finance market in Africa, Morocco ranked among the first, five most developed market by African standard. The market which recorded 7.58 percent of GDP in 2001, which was the lowest for the period, gradually increased to its peak in 2013 when it recorded 18.74 percent of GDP. It declined to 16.83 percent of GDP in 2014.

TABLE 4.5: NAMIBIA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (US \$-MILLIONS) 1985 - 2014

YEARS	TOL	TOHL	GDPPRICE	LINTR	THLPTL	THLPGDP
1997	NA	NA	4102.649	20.17917	NA	NA
1998	NA	NA	3826.528	20.71917	NA	NA
1999	NA	NA	3818.954	18.48417	NA	NA
2000	1532.150	621.44	3911.000	15.27833	40.56000	15.89000
2001	1094.478	449.94	3350.000	14.53167	41.11000	12.67000
2002	1728.477	733.22	3369.000	13.83750	42.42000	21.76000
2003	2612.567	920.93	4932.000	14.70083	35.25000	18.67000
2004	3759.979	1409.24	6617.000	11.38917	37.48000	21.30000
2005	4058.505	1574.70	7258.000	10.61000	38.80000	21.70000
2006	4074.433	1671.74	7978.000	11.18083	41.03000	20.95000
2007	4418.509	1914.54	8812.000	12.88417	43.33000	21.73000
2008	3430.597	1558.52	8830.000	13.73667	45.43000	17.65000
2009	4675.072	2107.99	8859.000	11.11833	45.09000	23.79000
2010	6444.850	2540.56	11069.00	9.720000	39.42000	22.95000
2011	5693.417	2309.25	12680.00	8.730000	40.56000	18.21000
2012	6786.680	5392.88	12299.00	8.651875	79.46271	43.84812
2013	6451.970	4956.28	12754.88	8.289167	76.81809	38.85792
2014	6545.220	4903.03	12995.24	8.699167	74.91009	37.72943

Sources:

Bank of
Namibia(2014)
Quarterly Bulletin
HOFINET - Housing Finance Information
Network: <http://hofinet.org>

The World Bank: <http://data.worldbank.org>
Centre for Affordable Housing Finance in Africa - Africa Housing
Finance Yearbook 2012 and 2013
Author's computation (2016)

It has been argued that Namibia has one of the most developed housing finance market in Africa, second only to South Africa.

Globally, data on housing finance has been an issue, especially in developing nations, including Namibia. Table 4.5 present data for objective 7

Data on table 4.5 were gathered from different sources as no single source could make all the required data available.

Total outstanding loans in US dollar were computed by the author from housing loan as a percentage of total loan and housing loan as a percentage of GDP as stated by HOFINET organization for the years 2000-2011, While similar figures for the 2012- 2014 were sourced from Bank of Namibia quarterly bulletin. On the contrary GDP figures for the years 1985-1999 were obtained from World Bank data base. While figures for the years 2000 ñ 2014 were from Hofinet organization. While table 4.5 showed that the study period is 1985-2014 (30 years), housing finance data were available only for the period 2000 ñ 2014 (15 years).

In the year 2000, the housing finance sector accounted for 15.89 percent of growth in the economy while in 2001, it dropped to 12.67 percent. Furthermore in 2002, it increased to 21.76 percent. The housing finance sector recorded its highest contribution to economic growth in Namibia in 2012 when it accounted for 43.85 percent of the GDP.

Unlike the other sampled economies in this study, there is no direct relationship between interest rate and the quantity of money available in the housing finance market. It therefore implies that apart from interest (lending rate), there are other factors that accounted for the growth of the housing finance market, which in turn impact on economic growth.

4.3 PRESENTATION OF RESULTS AND TEST OF HYPOTHESIS FOR THE COUNTRIES UNDER STUDY

In this section, the hypotheses stated in chapter one are tested using the stated test statistics.

4.3.1 KENYA

Table 4.6 KENYA, DESCRIPTIVE STATISTICS

	LNT0HL	LNT1LPTL	LNRGDP	LNMBOHL	LNCBOHL
Mean	10.98601	2.187811	10.07356	9.605786	10.89008
Median	10.81472	2.152717	10.03023	9.582961	10.67628
Maximum	12.75026	2.637693	10.44372	10.72674	12.60848
Minimum	9.846706	1.761571	9.957214	8.757002	9.846706
Std. Dev.	0.951557	0.256901	0.127197	0.742591	0.899901
Skewness	0.576782	0.420454	2.256871	0.146200	0.680844
Kurtosis	1.945133	2.149088	6.671294	1.496821	2.052278
Jarque-Bera	1.832591	1.073382	25.38920	1.074812	2.064276
Probability	0.399998	0.584680	0.000003	0.584262	0.356244
Sum	197.7482	39.38061	181.3240	105.6636	196.0214
Sum Sq. Dev.	15.39284	1.121965	0.275042	5.514414	13.76697
Observations	18	18	18	18	18

Source: *Author's Computation(2016)*

The descriptive statistics in Table 4.6 above show the aggregated averages of mean, median and mode for all the observations. The dispersion and variations in the series are shown by the standard deviation while the degree of peakedness and degree of departure from symmetry are shown by kurtosis and skewness respectively. A combined test for skewness and kurtosis known as Jacque Bera Statistics, which is also a test for normality is shown in the table above, with variable LNRGDP having the highest JB statistic and a p-value very nearly 0.0000. Also its kurtosis value greater than 3 shows strong evidence that variable LNRGDP is leptokurtic. However, it can be observed that all the variables except LNRGDP have kurtosis of less than 3, suggesting a departure from normality, though this is not a problem with financial time series.

FIG 1: KENYA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (BILLIONS OF SHILLINGS) 1985-2014

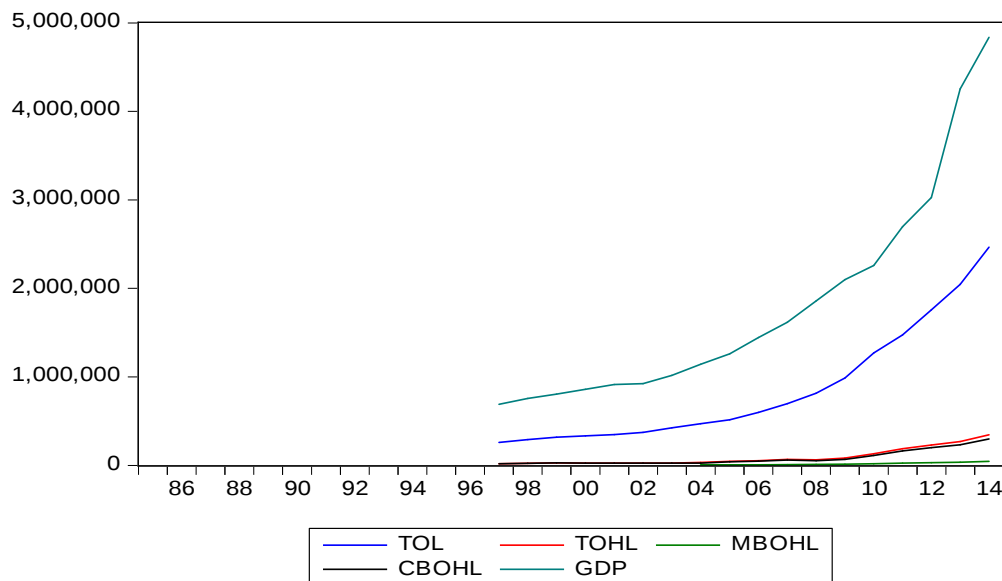


Fig 1 gives a graphical representation of the Kenya economy and the role of the financial sector. While the GDP growth was moderate from 1997 to 2002, it accelerated rapidly thereafter and reached its peaks in 2014.

Outstanding total loan followed the GDP pattern but at a slower rate. While outstanding in commercial banks mortgage credit is almost unnoticeable between 1997 and 2005. It rose slightly from 2006 to 2014. On the contrary the contributions of mortgage banks was so small that it could not rise about the horizontal line. This means that the major players in the housing finance market in Kenya are the commercial banks.

However their contribution is so small to the point that a combination of commercial banks and mortgage banks contributions didn't translated to statistical significant impact on the economic growth of Kenya.

Table 4.7 Stationarity Tests of the Key Variables

Variable	ADF Stat	Critical Value @5%	P.value	Order of integration
LNMBOHL	-4.7199	-3.3209	0.085	I(1)
LNRGDP	-3.1338	-3.0655	0.0441	I(1)
LNCBOHL	-4.1494	-3.7911	0.0283	I(1)
LNTHLPTL	-3.08836	-1.9644	0.0043	I(1)

Source: Author's Computation(2016)

From Table 4.7, we discover that the variables are integrated of the same order as they are all stationary at first difference. This is so because at first difference, the ADF stat for all the variables are more negative than the critical values at 5% and their corresponding probability value are all less than 5%. It is on this premise that the null hypothesis of the presence of unit root is rejected and the alternative accepted.

4.3.2 Test of Hypothesis One and Two

Step One: Restatement of Hypothesis in Null and Alternative Form

Ho₁: The contributions of housing finance by mortgage banks does not have positive and significant impact on economic growth of Kenya.

Ha₁: The contributions of housing finance by mortgage banks has positive and significant impact on economic growth of Kenya.

Ho₂: The contributions of housing finance by commercial banks does not have positive and significant impact on economic growth of Kenya.

Ha₂: The contributions of housing finance by commercial banks has positive and significant impact on economic of growth of Kenya.

Test Statistics: Ordinary least square with other diagnostics tests

Step Two: Presentation and Interpretation of Regression Result

The table below presents the regression result for the test of hypotheses one and two

Table 4.8 Regression Results Test of Model One and Two

Dependent Variable: LNRGDP

Method: Least Squares

Date: 07/25/16 Time: 20:52

Sample (adjusted): 1997 2014

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.694553	1.021119	8.514729	0.0001
LNMBOHL	0.056721	0.328538	0.172645	0.8678
LNCBOHL	0.019019	0.485007	0.039214	0.9698
LNTHLPTL	0.278696	0.787465	0.353915	0.7338
R-squared	0.571281	Mean dependent var	10.10075	
Adjusted R-squared	0.487545	S.D. dependent var	0.159062	
S.E. of regression	0.124481	Akaike info criterion	-1.054042	
Sum squared resid	0.108468	Schwarz criterion	-0.909352	
Log likelihood	9.797229	Hannan-Quinn criter.	-1.145248	
F-statistic	4.109241	Durbin-Watson stat	1.797170	
Prob(F-statistic)	0.007919			

SOURCE: *Author's Computation(2016)*

From table 4.8, Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Mortgage Banks contribution to Housing finance is proxied by Mortgage Banks Outstanding Housing Loan (MBOHL), Ratio of Total Housing Loan to Total Loan (THLPTL) is used as control variable.

From the regression result in the table LNMBOHL shares a positive and non-statistically significant relationship with RGDP as the coefficient is positive (0.056721) and the p-value is greater than 5%

Step Three: Diagnosis of the Regression Result

From the result shown on table 4.8, the R^2 is 57% indicating that the independent variables account for 57% of the variation in RGDP while 43% of the variation is explained by factors outside the model. The F statistic also shows that the overall regression is statistically significant and can be used for meaningful analyses. This is shown by the p-value that is less than 5%. (0.008). The Durbin Watson Stat which is 1.79 is approximately 2 showing that there is no evidence of autocorrelation. Essentially, the regression is good enough for the test of the set hypothesis.

Step Four: Decision for Hypothesis One and Two

Given the fact that the p-values of the t-statistics in both hypothesis one and two are all greater than 5%, we refuse to accept the alternative hypothesis and conclude that both Mortgage Banks and Commercial Banks contribution to Housing finance do not have significant impact on economic growth in Kenya.

This is to say that, for both hypotheses one and two, we refuse to reject the null hypothesis.

4.3.4 NIGERIA

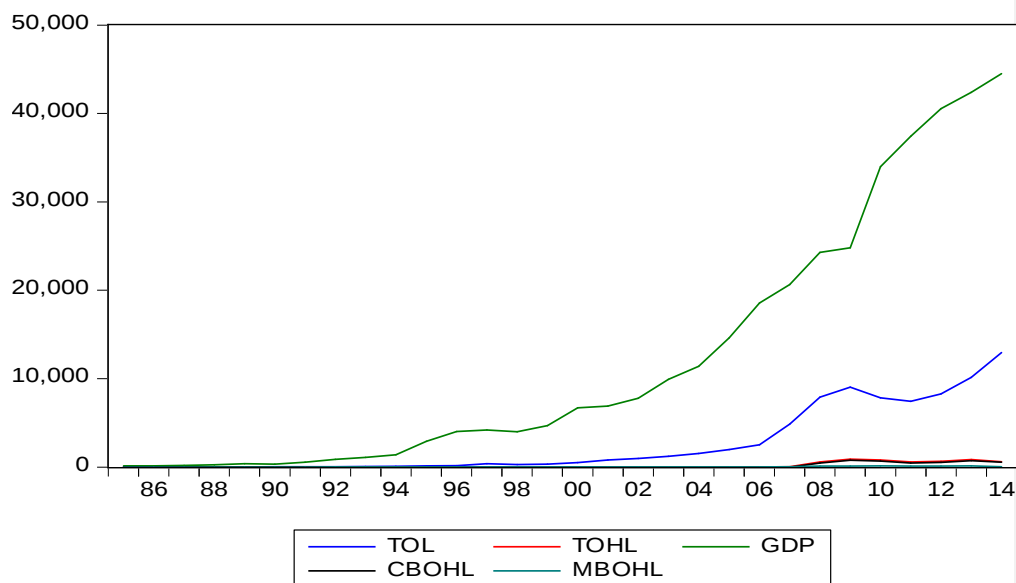
Table 4.9 NIGERIA, DESCRIPTIVE STATISTICS

	LNRGDP	LNMBOHL	LNCBOHL	LNTHLPGP
Mean	5.361345	1.748246	3.465593	-1.453794
Median	5.288628	1.791759	1.544198	-0.679628
Maximum	5.828497	4.889417	6.656907	1.285555
Minimum	4.904583	-1.565900	0.913768	-4.363312
Std. Dev.	0.280466	2.336723	2.659163	2.045743
Skewness	0.296004	0.197940	0.248100	-0.234739
Kurtosis	1.831747	1.455706	1.086687	1.387385
Jarque-Bera	2.144111	2.435665	2.604653	3.526171
Probability	0.342304	0.295871	0.271898	0.171515
Sum	160.8403	40.20966	55.44948	-43.61383
Sum Sq. Dev.	2.281181	120.1260	106.0672	121.3669
Observations	18	18	18	18

SOURCE: *Author's Computation(2016)*

The descriptive statistics in Table 4.9 above show the aggregated averages of mean, median and mode for all the observations. The dispersion and variations in the series are shown by the standard deviation while the degree of pointedness and degree of departure from symmetry are shown by kurtosis and skewness respectively. A combined test of skewness and kurtosis known as Jarque Bera Statistics which test for normality is also shown in the table above, with variable LNTHLPGP having the highest JB statistic and a p-value 0.17. Also none of the kurtosis value is greater than 3 showing evidence of platykurtosis. However, it can be observed that all the variables have kurtosis of less than 3, suggesting a departure from normality, though this is not a problem with financial time series.

FIG 2: NIGERIA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (BILLIONS OF NAIRA) 1985-2014



The above graph (fig 2), shows the housing finance data movement in Nigeria. While the GDP moved slowly from 1985 to 1989, it started rising from 1990 and got to its peak in 2014. The slope of the total outstanding loan was below that of the GDP with a wide margin, indicating the extent of the financial sector contribution to economic growth. The Slope of CBOHL only rose above the horizontal line in 2008, indicating that the impact of contributions to housing finance by commercial banks on economic growth of Nigeria is zero. The contributions of mortgage banks could be said to be almost non-existence.

Table 4.10 Stationarity Tests of the Key Variables

Variable	ADF Stat	Critical Value @5%	P.value	Order of integration
LNMBOHL	-4.0215	-3.6584	0.0253	I(1)
LNCBOHL	-6.5501	-4.0081	0.0025	I(1)
LNRGDP	-6.2810	-3.5950	0.0001	I(1)
LNTHLPGDP	-4.2121	-3.5875	0.0133	I(1)

SOURCE: *Author's Computation(2016)*

From Table 4.10, we discover that the variables are integrated of the same order as they are all stationary at first difference. This is so because at first difference, the ADF stat for all the variables are more negative than the critical values at 5% and their corresponding probability

value are all less than 5%. It is on this premise that the null hypothesis of the presence of unit root is rejected and the alternative accepted.

4.3.5 Test of Hypothesis Three and Four

Step One: Restatement of Hypothesis in Null and Alternative Form

H₀₃: The contribution of housing finance by Mortgage banks does not have positive and significant impact on economic growth of Nigeria.

H_{a3}: The contribution of housing finance by Mortgage banks has positive and significant impact on economic growth of Nigeria.

H₀₄: The contribution of housing finance by Commercial banks does not have positive and significant impact on economic growth of Nigeria

H_{a4}: The contribution of housing finance by Commercial banks has positive and significant impact on economic growth of Nigeria

Test Statistics: Ordinary least square with other diagnostics tests

Step Two: Presentation and Interpretation of Regression Result

Table 4.11 Regression Results Test of Model Three and four

Dependent Variable: LNRGDP

Method: Least Squares

Date: 07/25/16 Time: 21:11

Sample (adjusted): 1997 2014

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.323074	0.340735	15.62232	0.0000
LNMBOHL	0.115620	0.097772	1.182550	0.2902
LNCBOHL	0.000771	0.122504	0.006291	0.9952
LNTHLPGP	-0.163188	0.131174	-1.244057	0.2686
R-squared	0.888235	Mean dependent var	5.648245	
Adjusted R-squared	0.821176	S.D. dependent var	0.225668	
S.E. of regression	0.095430	Akaike info criterion	-1.559755	
Sum squared resid	0.045534	Schwarz criterion	-1.472100	
Log likelihood	11.01890	Hannan-Quinn criter.	-1.748915	
F-statistic	13.24559	Durbin-Watson stat	2.306597	
Prob(F-statistic)	0.008160			

Source: Author Computation(2016)

From table 4.11, Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Mortgage Banks contribution to Housing finance is proxied by Mortgage Banks Outstanding Housing Loan (MBOHL) and Commercial Banks contribution to Housing

finance is proxied by Commercial Banks Outstanding Housing Loan (CBOHL), Ratio of Total Housing Loan to Total Loan (THLPTL) is used as control variable. From the regression result in the table LNMBOHL shares a positive and not statistically significant relationship with RGDP as the coefficient is positive (0.115620) and the p-value is greater than 5% (0.2902). LNCBOHL shares a positive but not statistically significant relationship with RGDP as the coefficient is positive (0.000771) and the p-value is greater than 5% (0.9952).

Step Three: Diagnosis of the Regression Result of Model Three and four

From the result shown above, the R^2 is 89% indicating that the independent variables account for 89% of the variation in RGDP while 11% of the variation is explained by factors outside the model. The F statistic also shows that the overall regression is statistically significant and can be used for meaningful analyses. This is shown by the p-value that is less than 5%. (0.008). The Durbin Watson Stat which is 2.3 is approximately 2 showing that there is no evidence of autocorrelation. Essentially, the regression is good enough for the test of the set hypothesis.

Step Four: Decision for Hypothesis Three and Four

Given the fact that the p-values of the t-statistics in hypothesis three and four are all greater than 5%, we refuse to accept the alternative hypothesis and conclude that both Mortgage Banks and Commercial Banks contribution to Housing finance do not have significant impact on economic growth in Nigeria. This is to say that for both hypotheses three and four, we refuse to reject the null hypothesis.

4.3.6 BURUNDI

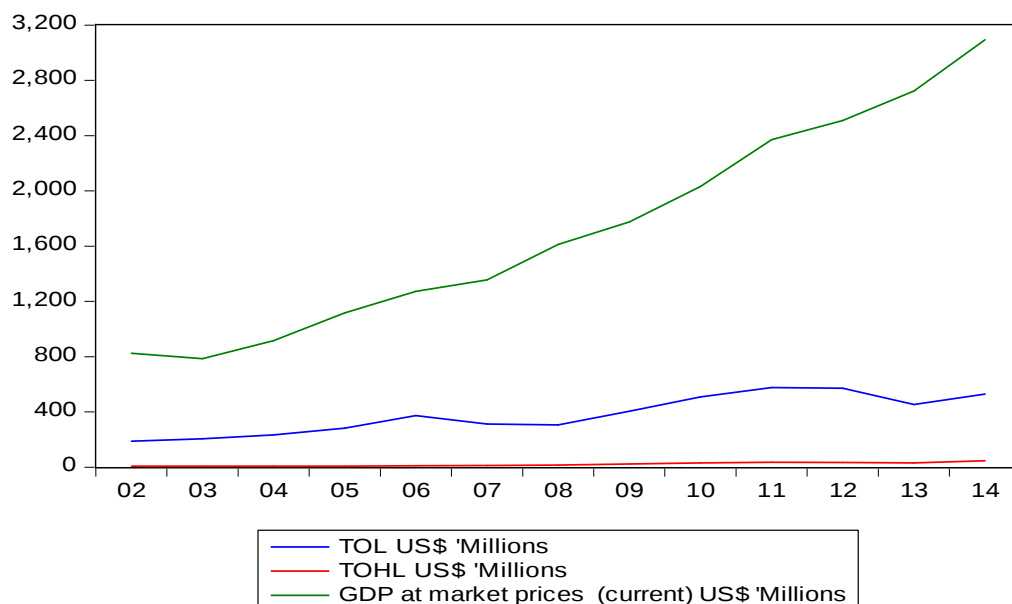
Table 4.12 BURUNDI, DESCRIPTIVE STATISTICS

	LNCPI	LNGDPPRICE	LNLINTR	LNRGDP	LNTHLPTL	LNTOHL	LNTOL
Mean	3.477137	7.104305	2.682958	3.627168	1.526320	2.795821	5.874671
Median	3.627054	7.017023	2.661657	3.124719	1.633154	2.750471	5.921210
Maximum	4.983062	8.037220	2.968746	5.031669	2.172339	3.838592	6.356858
Minimum	2.043227	6.665684	2.484907	2.752984	0.989541	1.877937	5.239250
Std. Dev.	0.978224	0.384909	0.154085	0.812374	0.387272	0.716245	0.387466
Skewness	-0.057618	1.096389	0.182752	0.590497	-0.065734	0.049325	-0.266021
Kurtosis	1.632306	3.089621	1.817934	1.656218	1.776434	1.375479	1.768585
Jarque-Bera	2.354832	6.020382	1.722233	4.000619	0.820298	1.434767	0.974703
Probability	0.308074	0.049282	0.422690	0.135293	0.663551	0.488027	0.614251
Sum	104.3141	213.1292	72.43987	108.8150	19.84216	36.34567	76.37073
Sum Sq. Dev.	27.75072	4.296483	0.617295	19.13861	1.799751	6.156087	1.801563
Observations	18	18	18	18	18	18	18

SOURCE: Authors Computation (2016)

The descriptive statistics in Table 4.12 above show the aggregated averages of mean, median and mode for all the observations. The dispersion and variations in the series are shown by the standard deviation while the degree of pointedness and degree of departure from symmetry are shown by kurtosis and skewness respectively. A combined test of skewness and kurtosis known as Jacque Bera Statistics which test for normality is also shown in the table above, with variable LNGDPPPRICE and LNRGDP having the high JB statistic but low p-values. Also only LNGDPPPRICE has kurtosis value greater than 3 showing evidence of leptokurtic. However, it can be observed that all other variables have kurtosis of less than 3, suggesting a departure from normality, though this is not a problem with financial time series.

FIG 3: BURUNDI- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (MILLIONS OF US\$) 1985-2014



The impact of aggregate housing finance on economic growth of Burundi is revealed in fig 3. The gradient of the GDP which started in 2002, fell in 2003, and thereafter rose continuously. It however fell again in 2008, and continued rising again until it got to its peak in 2014.

The slop of the Total outstanding loan (TOL) is platy-kurtics, suggesting a departure from normality. This is usual with financial time series data.

Similarly the slop of the total outstanding housing loans (TOHL) only became visible in 2008. It increased slightly from 2009 through 2014, indicating a minimal impact of aggregate housing finance on economic growth of Burundi.

Table 4.13 Stationarity Tests of the Key Variables

Variable	ADF Stat	Critical Value @5%	Pvalue	Order of integration
LNTOHL	-2.4214	-1.982	0.0215	I(1)
LNLINTR	-2.105	-1.977	0.0391	I(1)
LNRGDP	-3.907	-3.580	0.0252	I(1)
LNTOL	-2.359	-1.9777	0.0237	I(1)
LNTHLPTL	-3.142	-1.982	0.0053	I(1)

SOURCE: *Author's Computation (2016)*

From Table 4.13, we discover that the variables are integrated of the same order as they are all stationary at first difference. This is so because at first difference, the ADF stat for all the variables are more negative than the critical values at 5% and their corresponding probability value are all less than 5%. It is on this premise that the null hypothesis of the presence of unit root is rejected and the alternative accepted.

4.3.7 Test of Hypothesis Five

Step One: Restatement of Hypothesis in Null and Alternative Form

H₀₅: Aggregate housing finance does not have positive and significant impact on economic growth of Burundi.

H_{a5}: Aggregate housing finance has positive and significant impact on economic growth of Burundi.

Test Statistics: Ordinary Least square with other diagnostics tests

Step Two: Presentation and Interpretation of Regression Result

Table 4.14 Regression Results Test of Model Five

Dependent Variable: LNRGDP

Method: Least Squares

Date: 07/25/16 Time: 15:09

Sample: 1997 2014

Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.143483	0.822177	2.607083	0.0284
LNLINTR	0.180946	0.255216	0.708994	0.4963
LNTHLPTL	-0.240127	0.125272	-1.916850	0.0875
LNTOHL	0.240017	0.092313	2.600028	0.0287
R-squared	0.672135	Mean dependent var		2.949582
Adjusted R-squared	0.562847	S.D. dependent var		0.087794
S.E. of regression	0.058047	Akaike info criterion		-2.607456
Sum squared resid	0.030325	Schwarz criterion		-2.433625
Log likelihood	20.94846	Hannan-Quinn criter.		-2.643186
F-statistic	6.150118	Durbin-Watson stat		1.839643
Prob(F-statistic)	0.014633			

Source: *Author's Computation (2016)*

From Table 4.14 Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Aggregate Housing finance is proxied by Total Outstanding Housing Loan (TOHL), Interest Rate (LINTR) and Ratio of Total Housing Loan to Total Loan (THLPTL) are used as control variables.

Step Three: Diagnosis of the Regression Result of Model Five

From the result shown above, the R^2 is 67% indicating that the independent variables account for 67% of the variation in RGDP while 33% of the variation is explained by factors outside the model. The F statistic also shows that the overall regression is statistically significant and can be used for meaningful analyses. This is shown by the p-value that is less than 5%. (0.01). The Durbin Watson Stat which is 1.8 is approximately 2 showing that there is no evidence of autocorrelation. Essentially, the regression is good enough for the test of the set hypothesis.

Step Four: Decision for Hypothesis Five

From the regression result in table 4.14, LNTOHL shares a positive and significant relationship with RGDP as the coefficient is positive (0.240017) and the p-value is less than 5% (0.0287). Based on this, we reject the null hypothesis and accept the alternative and conclude that housing finance contributes to economic growth in Burundi.

4.3.8 MOROCCO

Table 4.15 MOROCCO, DESCRIPTIVE STATISTICS

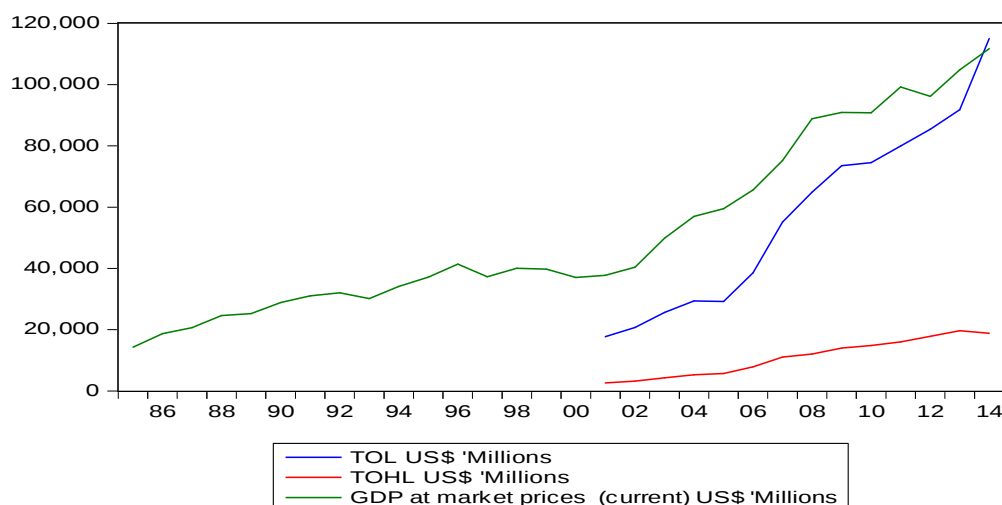
	LNRGDP	LNLINTR	LNTHLPTL	LNTOHL	LNTOL
Mean	2.465071	2.458597	2.919539	9.110712	10.79634
Median	2.473616	2.530716	2.957427	9.353045	10.99877
Maximum	2.564139	2.667228	3.063391	9.885538	11.65295
Minimum	2.376406	2.047693	2.687847	7.865491	9.782814
Std. Dev.	0.052615	0.195942	0.116375	0.689273	0.613174
Skewness	0.001769	-0.619871	-0.713693	-0.518346	-0.304544
Kurtosis	2.120725	1.952487	2.286973	1.858159	1.659034
Jarque-Bera	0.966422	2.963525	1.485072	1.387476	1.265355
Probability	0.616800	0.227237	0.475906	0.499705	0.531168
Sum	73.95214	66.38213	40.87354	127.5500	151.1488
Sum Sq. Dev.	0.080281	0.998229	0.176061	6.176266	4.887768
Observations	18	18	18	18	18

SOURCE: Author's Computation (2016)

The descriptive statistics in Table 4.15 above show the aggregated averages of mean, median and mode for all the observations. The dispersion and variations in the series are shown by the standard deviation while the degree of pointedness and degree of departure from symmetry are shown by kurtosis and skewness respectively. A combined test of skewness and kurtosis known as Jarque Bera Statistics which tests for normality is also shown in the

table above, with none of the variables having a JB statistic greater than 3. Also none of the values of kurtosis is greater than 3 showing no strong evidence of leptokurtic while at the same time suggesting a departure from normality, though this is not a problem with financial time series.

FIG 4: MOROCCO- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (MILLIONS OF US\$) 1985-2014



Housing finance data and other variables in Morocco is represented graphically in fig. 4. While the GDP cover the period 1985 through 2014, the total outstanding loan (TOL) and total outstanding housing loans (TOHL) covered the period 2001 through 2014. The graph revealed that there is a significant relationship between economic growth and financial sector contributions to economic growth as both line intercept in 2014.

There was an incremental growth in aggregate housing finance (TOHL) from 2001 through 2014. However there was a little drop in 2014 from the 2013 position. When Compared to the other countries of Kenya, Nigeria and Burundi, the growth in aggregate housing finance contribution to economic growth of Morocco is quite significant.

Table 4.16 Stationarity Tests of the Key Variables

Variable	ADF Stat	Critical Value @5%	P.value	Order of integration
LNTOHL	-4.2492	-1.982	0.0007	I(1)
LNLINTR	-4.3175	-1.958	0.0002	I(1)
LNRGDP	-3.8214	-2.650	0.0004	I(1)
LNTOL	-3.3837	-1.9777	0.0031	I(1)
LNTHLPTL	-3.142	-1.982	0.0053	I(1)

Source: Author's Computation(2016)

From Table 4.16, we discover that the variables are integrated of the same order as they are all stationary at first difference. This is so because at first difference, the ADF stat for all the variables are more negative than the critical values at 5% and their corresponding probability value are all less than 5%. It is on this premise that the null hypothesis of the presence of unit root is rejected and the alternative accepted.

4.3.9 Test of Hypothesis Six

Step One: Restatement of Hypothesis in Null and Alternative Form

H_{06} : Aggregate housing finance does not have positive and significant impact on economic growth of Morocco

H_{a6} : Aggregate housing finance has positive and significant impact on economic growth of Morocco

Test Statistics: Ordinary Least square with other diagnostics tests

Step Two: Interpretation of Regression Result

Table 4.17 Regression Results Test of Model Six

Dependent Variable: LNRGDP

Method: Least Squares

Date: 07/25/16 Time: 16:28

Sample (adjusted): 1997 2014

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.307856	0.160280	14.39892	0.0000
LNINTR	-0.156716	0.056068	-2.795085	0.0209
LNTHLPTL	-0.040124	0.038546	-1.040930	0.3251
LNTOHL	0.073764	0.008787	8.394164	0.0000
R-squared	0.962791	Mean dependent var		2.455263
Adjusted R-squared	0.950388	S.D. dependent var		0.041971
S.E. of regression	0.009349	Akaike info criterion		-6.259542
Sum squared resid	0.000787	Schwarz criterion		-6.085711
Log likelihood	44.68702	Hannan-Quinn criter.		-6.295272
F-statistic	77.62504	Durbin-Watson stat		1.450750
Prob(F-statistic)	0.000001			

SOURCE: *Author's Computation (2016)*

From Table 4.17 Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Aggregate Housing finance is proxied by Total Outstanding Housing Loan (TOHL), Interest Rate (LINTR) and Ratio of Total Housing Loan to Total Loan (THLPTL) are used as control variables.

Step Three Diagnosis of the Regression Result

From the result shown in Table 4.17 above, the R^2 is 96% indicating that the independent variables account for 96% of the variation in RGDP while 4% of the variation is explained by factors outside the model. The F statistic also shows that the overall regression is statistically significant and can be used for meaningful analyses. This is shown by the p-value that is less than 5%. (0.000001). The Durbin Watson Stat which is 1.5 is approximately 2 showing that there is no evidence of autocorrelation. Essentially, the regression is good enough for the test of the set hypothesis.

Step Four: Decision for Hypothesis Six

From the regression result in table 4.17, LNTOHL shares a positive and significant relationship with RGDP as the coefficient is positive (0.073764) and the p-value is less than 5% (0.0000). Based on this, we reject the null hypothesis and accept the alternative and conclude that housing finance contributes to economic growth in Morocco.

4.3.10 NAMIBIA

Table 4.18 NAMIBIA, DESCRIPTIVE STATISTICS

	LNINTR	LNRGDP	LNTHLPTL	LNTOHL
Mean	2.383501	4.577260	3.854644	7.630997
Median	2.408595	4.646651	3.747620	7.557233
Maximum	2.687904	4.793768	4.375288	8.592835
Minimum	2.114949	3.986030	3.562466	6.597446
Std. Dev.	0.198502	0.214404	0.288099	0.616767
Skewness	0.090857	-1.848763	1.073392	0.182618
Kurtosis	1.665864	5.614081	2.474507	2.252917
Jarque-Bera	0.982008	11.10694	2.645948	0.374579
Probability	0.612011	0.003874	0.266342	0.829204
Sum	30.98551	59.50438	50.11037	99.20296
Sum Sq. Dev.	0.472836	0.551629	0.996015	4.564817
Observations	18	18	18	18

SOURCE: Author's Computation (2016)

The descriptive statistics in Table 4.18 above show the aggregated averages of mean, median and mode for all the observations. The dispersion and variations in the series are shown by the standard deviation while the degree of pointedness and degree of departure from symmetry are shown by kurtosis and skewness respectively. A combined test of skewness and kurtosis known as Jarque Bera Statistics which test for normality is also shown in the table above, with variable LNRGDP having the highest JB statistic although a low p-values. Also only LNRGDP has kurtosis value greater than 3 showing evidence of platykurtic.

However, it can be observed that all other variables have kurtosis of less than 3, suggesting a departure from normality, though this is not a problem with financial time series.

FIG 5: NAMIBIA- HOUSING LOANS AND OTHER VARIABLES UNDER STUDY (MILLIONS OF US\$) 1985-2014

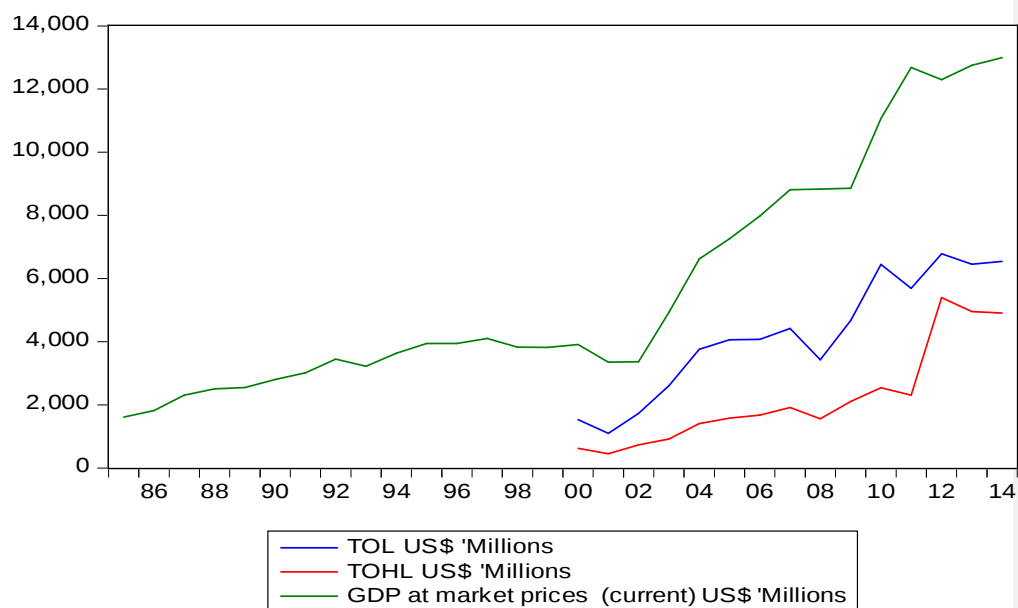


Fig 5, is a graphical representation of the aggregate housing finance and financial sectors contribution to economic growth of Namibia.

Total outstanding loans (TOL) and total outstanding housing loans (TOHL) are moving in the same direction. The higher the value of total outstanding loans, the higher the value of total outstanding housing loans.

Table 4.19 Stationarity Tests of the Key Variables

Variable	ADF Stat	Critical Value @5%	P.value	Order of integration
LNTOHL	-5.7047	-3.1199	0.0219	I(1)
LNLINTR	-4.4170	-3.0206	0.0027	I(1)
LNRGDP	-2.8469	-1.9777	0.0089	I(1)
LNTHLPTL	-5.7047	-3.1199	0.0219	I(1)

SOURCE: Author's Computation (2016)

From Table 4.19, we discover that the variables are integrated of the same order as they are all stationary at first difference. This is so because at first difference, the ADF stat for all the variables are more negative than the critical values at 5% and their corresponding probability

value are all less than 5%. It is on this premise that the null hypothesis of the presence of unit root is rejected and the alternative accepted.

4.3.11 Test of Hypothesis Seven

Step One: Restatement of Hypothesis in Null and Alternative Form

H₀₇: Aggregate housing finance does not have positive and significant impact on economic growth of Namibia

H_{a7}: Aggregate housing finance has positive and significant impact on economic growth of Namibia

Test Statistics: Ordinary Least square with other diagnostics tests

Step Two: Presentation and Interpretation of Regression Result

Table 4.20 Regression Results Test of Model Seven

Dependent Variable: LNRGDP
Method: Least Squares
Date: 07/25/16 Time: 17:02
Sample (adjusted): 1997 2014
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.955559	1.366120	1.431470	0.1861
LNINTR	0.333026	0.301896	1.103117	0.2986
LNTHLPTL	-0.890631	0.188922	-4.714279	0.0011
LNTOTL	0.689424	0.138067	4.993398	0.0007
R-squared	0.854380	Mean dependent var		4.577260
Adjusted R-squared	0.805840	S.D. dependent var		0.214404
S.E. of regression	0.094474	Akaike info criterion		-1.633322
Sum squared resid	0.080328	Schwarz criterion		-1.459491
Log likelihood	14.61659	Hannan-Quinn criter.		-1.669052
F-statistic	17.60155	Durbin-Watson stat		1.677939
Prob(F-statistic)	0.000417			

SOURCE: Author's Computation (2016)

Step Three: Diagnosis of the Regression Result of Model Seven

From the result shown in Table 4.20 above, the R² is 85% indicating that the independent variables account for 15% of the variation in RGDP while 4% of the variation is explained by factors outside the model. The F statistic also shows that the overall regression is statistically significant and can be used for meaningful analyses. This is shown by the p-value that is less than 5%. (0.000417). The Durbin Watson Stat which is 1.8 is approximately 2 showing that

there is no evidence of autocorrelation. Essentially, the regression is good enough for the test of the set hypothesis.

Step Four: Decision for Hypothesis Seven

From Table 4.20 Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Aggregate Housing finance is proxied by Total Outstanding Housing Loan (TOHL), Interest Rate (LINTR) and Ratio of Total Housing Loan to Total Loan (THLPTL) are used as control variables. Based on this, we reject the null hypothesis and accept the alternative and conclude that housing finance contributes to economic growth in Namibia.

4.4 Discussion and Implications of Results

The results found from the empirical analyses made in this study are summarized in the table below:

TABLE 4.21 SUMMARY OF RESULTS

COUNTRY	R ²	F-STAT	DW- STAT	SIGNIFICANCE OF FINDINGS
Kenya	57%	4.109	1.797  2	i. No significant relationship between MBOHL and RGDP ii. No significant relationship between CBOHL and RGDP
Nigeria	85%	13.24	2.3  2	i. No significant relationship between MBOHL and RGDP ii. No significant relationship between CBOHL and RGDP
Burundi	67%	6.150	1.83  2	Housing finance shares a positive and significant relationship with RGDP
Morocco	96%	77.6	1.45  2	Housing finance shares a positive and significant relationship with RGDP
Namibia	85%	17.6	1.667  2	Housing finance shares a positive and significant relationship with RGDP

Source: Author's Computation (2016)

These findings and their empirical and theoretical implications are discussed in relation to the set objectives of this work.

Discussion of Findings

Objective One: to analyze the impact of the contributions to housing finance by Mortgage banks on economic growth of Kenya.

From table 4.8, Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Mortgage Banks contribution to Housing finance is proxied by Mortgage Banks Outstanding Housing Loan (MBOHL), Ratio of Total Housing Loan to Total Loan (THLPTL) is used as control variable. From the regression result in the table LNMBOHL shares a positive and none statistically significant relationship with RGDP as the coefficient is positive (0.056721) and the p-value is greater than 5%. (0.8678)

Similarly, fig 1 revealed that mortgage banking started in 2004 and its contribution to economic growth of Kenya was minimal. Even though the contributions were positive, it was almost unnoticeable. Factors attributable to the poor performance of the mortgage institution are low income wage, high lending interest rate and lack of robust housing finance market.

These findings are in tandem with the findings of Hassler (2011) and central Bank of Kenya (2010). Given the study titled: Housing and real estate finance in Middle East and North Africa countries, Hassler (2011) opined that the availability of housing at affordable rate is depended upon a robust mortgage system that guarantee long-term lending. Transaction of large investment cost should be spread over a long period of time at a fixed interest rate. In real estate investment, Middle East and North Africa lags behind other regions in making market resources available, the study concluded.

On the contrary, the Central Bank of Kenya (CBC) (2010) argues that in spite of the constraints, mortgage banking in Kenya has been growing steadily with effect from 2006. They argued that the number of new loans has been on the increase, 6,631 in 209.

Likewise the volume of outstanding mortgage loan rose from Kshs.7,834 billion in 2006 to Ksh.13,803 billion in 2010. In spite of this seemingly rapid increase in number of new loans customers and value of loans, CBK accepted that the mortgage market is comparatively new and relatively small by global standard.

In terms of outstanding mortgage loans to GDP ratio, Kenya is low by international standard but ahead of other countries in East Africa. Kenya has 3.53% debt/GDP ratio (CAHF, 2015), the highest in the region, while Uganda 0.90% (CAHF 2015) and Tanzania 0.36% (CAHF, 2014).

Out of the 44 banks in Kenya, only one is a mortgage firm, which explain why loans by mortgage bank is very small. On the average, mortgage between ksh. 4 and 6 million, which is out of the reach of the low and medium income earners. The survey by the CBK identified the following as constraints to mortgage banking in Kenya:

1. Access to long term funds
2. Low level of income/informality
3. Credit risk (lack of credit histories, documented income, etc)
4. High interest rates

These outlined four points in addition to the ones, outlined earlier are in conformity with objective one of this study, hence we conclude that objective one has been achieved.

Objective Two: To examine the impact of the contributions to housing finance by commercial banks on the economic growth of Kenya.

From table 4.8 Economic growth is proxied by Real Gross Domestic Product (RGDP) while commercial banks contributions to housing finance is proxied by Commercial banks outstanding housing loans (CBOHL): Ratio of Total Housing loans to Total loans (GHLPTL) is used as control variable. From the regression result in the table LNCBOHL shares a positive and none statistically significantly relationship with RGDP as the coefficient is positive (0.019019) and the P-value is greater than 520.

Fig 1 showed that commercial banks are the main participants in the housing finance market in Kenya. Although commercial banks started reporting their activities as from 1997, while the study period is thirty (30) years 1985- 2014, there were no data for the period 1985-1996, a period of twelve (12) years. What this signified is that the housing finance market is relatively new and under developed in Kenya.

Arvanittis (2013) Opined that access to mortgage finance is a major constrain to the development of the housing to the development of the housing finance market in Kenya. He further argued that across the African continent the ratio of outstanding mortgage loans to GDP remains very low. It averages 10% for the entire continents, which is low when compared to the developed nations like Europe were it is 50% and USA 70%. Looking at the housing market from a developer's perspective, the none availability of equity finance has been a major constrain to the production of housing stocks, he concluded.

According to HJCHS (2005), housing finance market is better understood when viewed within the context of a wider regional has the most developed and vibrant housing finance within East African. The housing finance sector contributed 27% to GDP growth in 2003. In spite of this achievement the market is still under developed when viewed from international perspective.

Comment [O1]:

Some of the factors identified as hindrances to the market are: non-performing loans, high interest rate, low capitalization of most of the commercial banks. These constraints accounts for why commercial banks contribution to economic growth of Kenya is not statistically significant.

The finds of Arvanitis (2013) and HJCHS (2005) are in line with objective two of this study

Objective three: To determine the impact of the contributions to housing finance by, mortgage banks on the Economic growth of Nigeria.

From table 4.11, Economic growth is proxied by Real Gross Domestic Product (RGDP) while mortgage banks contributions to Housing Finance is proxied by mortgage banks outstanding Housing loans (MBOHL), ratio of Total Housing loan to Total Loan (THL PTL) is used as control variable. From the regression result in the table 4.11 LNMBOHL share a positive and not statistically significant relationship with RGDP as the coefficient is positive (0.115620) and the P-value is greater than 5% (0.2902).

Mortgage banking as a strategy for housing delivery and economic growth has been in operation in most developed countries as early as 1930s. In Nigeria mortgage banking started with the establishment of the Nigerian Building Society in 1956 by the colonial government (Olaniran, 2003; Osibogun, 2016).

Even though mortgage banking started in Nigeria as far back in 1956, table 4.2 and fig. 2 revealed that activities of the market only came to the fore in 1992. The value of loans granted by the market in the year 1992 amounted to only N0.2089 billion. The low market performance continued until 2001, when for the first time the market granted loans of N1 billion. Given the capital intensive nature of housing, it is evident that N1 billion can only afford few number of housing units.

Trend analysis of outstanding mortgage loans by mortgage banks as depicted in fig. 2 revealed that the impact of the contributions to housing finance by mortgage banks on the economic growth of Nigeria is less than one percent on yearly average throughout the period under study.

Factors attributable to the poor performance of the mortgage banks includes but not limited to:

1. Inability of the mortgage banks to mobilize long term funds, either directly from members of the public or through the capital market.

2. Shortage of qualified personnel in mortgage banking.
3. Low interest rate paid to depositors in the mortgage market.
4. Low wages/salaries of the average Nigerian worker makes it difficult for him to participate in the mortgage market.
5. None participation in the National Housing Fund (NHF) scheme by some state government in the Nigerian Federation.
6. Inadequate capital base of most mortgage institutions and
7. High cost of acquiring land, cumber some procedures in obtaining certificate of occupancy (C of O) and other legal document of title to land.

These findings corresponds with the findings of similar studies carried out by Osibogun (2016), Akenju (2007) and Oyalowo (2012). Hence we concluded that objective three has been achieved

Objective Four: To ascertain the impact of the contributions to housing finance by commercial banks on the economic growth of Nigeria.

From table 4.11, Economic growth is proxied by Real Gross Domestic product (RGDP) while commercial banks contribution to housing finance is proxied by commercial banks outstanding housing loans (CBOHL), while ratio of total housing loan to total loans (THLPTL) is used as control variable. From the regression result LNCBOHL share a positive but none statistically significant relationship with RGDP as the coefficient is positive (0.000771) and the P-value is greater than 5% (0.9952).

Based on the evidence on table 4.2 and fig 2, it could be argued that commercial banks are the main sources of fund to the housing finance market in Nigeria. Due to the importance attached to housing finance as a catalyst for economic growth, the federal government directed commercial banks through the Central Bank of Nigeria to allocate a minimum of 5 percent of their total loan portfolio to the housing sector.

Sanusi (2003), observed that housing required huge capital outlay which is usually beyond the reach of low and medium income earner. Hence a major area of concern is mortgage financing which is inadvertently is regarded as a major constraints to housing delivery.

The CBN credit policy which place the housing sector on preferential list was a major boost to housing delivery and economic growth while it lasted. In the 1979/80 fiscal year the policy stipulated a minimum of 5 percent of commercial banks loans and advances for housing finance. The percentage was increased to 6 percent in 1980 while it was further increased to 13 percent in 1982. Commercial banks were compelled to comply with the policy guide line until 1993 when it was discontinued as a result of liberalization of the financial sector. This explainwhy there are not outstanding commercial banks housing loan for the period 1994 to 2007 in table 4.2.

However in 2008 commercial bank resumed granting of loans to the housing sector. On resumption the volume of loans granted by commercial banks out number that of mortgage banks on yearly, basis, which invariably make commercial banks the major contributors to housing finance in Nigeria.

For the period under review the contribution of both mortgage banks and commercial banks to economic growth of Nigeria ranges between 0.0127 percent and 3.6167 percent. In 1985 it was 1.8529 percent and declined to 0.0127 in 2000, and thereafter increased to 3.6167 (the highest) in 2009. It further decreased in 2014 to 1.3569 percent.\

These findings are in line with the findings of 1sa, Jimoh & Achueni (2013), Oyalowo (2012), Sanusi (2003) and CAHF (2015) who carried out similar studies. Given the inter-relationship of the findings it is evident that objective four has been achieved.

Objective Five: to evaluate the impact of the aggregate housing finance on economic growth of Burundi.

From table 4.13 Economic Growth is proxied by Real Gross Domestic Product (RGDP) while Aggregate Housing Finance is proxied by Total outstanding House loan (TOHL). Interest rate (LINTR) and ratio of Total Housing loans to Total loan (THLPTL) are used as control variables.

From the regression result in table 4.13, LNTOHL shares a positive and significant relationship with RGDP as the coefficient is positive (0.0240017) and the P-value is less than 5% (0.0287), which indicates that aggregate housing finance contributes to economic growth of Burundi.

Economic activities in the housing and housing finance sectors received a boost in Burundi with the return of peace in the country, following the end of the 13 years period of civil war,

from 1993-2005 (CAHF, 2013). With a coordinated policy on housing delivery so as to accommodate the returning refugees, the housing finance sector received a boost which impacted significantly on economic growth of Burundi.

Although by African continent's standard, the financial sector and housing finance market in Burundi is under- developed. Average mortgage percentage of GDP is 1.19%. There is a bright prospect of growth for the housing and housing finance sector in the country.

The findings of objective five is supported by the findings of chen, Hoa & Turner (2006), Giddings (2007) and CAHF (2013). In their separate studies, they demonstrated how housing finance could aid economic growth through its inter-relationship with other sectors of an economy.

Objective Six: To appraise the impact of the aggregate housing finance on economic growth of Morocco.

From table 4.16 Economic growth is proxied by Real Gross Domestic Product (RGDP) while aggregate housing finance is proxied by total outstanding Housing loan (TOHL). Interest rate (LINTE) and ratio of Total Housing loan to Total loan (THLPTL) are used as control variables.

From the regression result in table 4.17, LNTOHL shares a positive and significant relationship with RGDP as the coefficient is positive (0.073764) and the P-value is less than 5% (0.0000).

Based on the regression result and fig. 4, we concluded that aggregate housing finance contribute to economic growth in Morocco. It has been argued that the financial sector and housing finance in Morocco is one of the most developed in Africa. Given the importance attached to the housing sub-sector, the Moroccan 2011 constitution states that decent housing is a priority and a right in Morocco.

In North Africa, Morocco has the most diversified and advanced housing finance market. Participants in the market includes private and public commercial banks, micro finance institutions, insurance companies and pension fund administrators among others. It takes a maximum of 40 (forty) days to register property. Registration process involves eight stages only. This is a great improvement when compared to some African countries where registration procedure involves more than nineteen stages and period of property registration ranges between 365 and 1095 days.

At the end of 2014 mortgage interest stood at a moderate rate of 5.92 percent, mortgage term is 21 years. Other factors attributable to the growth of the housing finance market includes, growing demand for housing, liberation of the economy and sound economic policies adopted by the government. These findings is supported by the findings in the studies of CAHF (2015) and Hassler (2011). Hence we conclude that objectives six has been achieved.

Objective Seven: To determine the impact of the aggregate housing finance on economic growth of Namibia.

From table 4.20 Economic Growth is proxied by Real Gross Domestic Product (RGDP) while aggregate housing finance is proxied by Total outstanding Housing Loan (TOHL). Interest rate (LINTR) and ratio of Total Housing Loan to Total loan (THLPTL) are used as control variable. From the regression result in table 4.20, LNTOHL, shares a positive and significant relationship with RGDP as the coefficient is positive (0.689424) and the P-value is less than 5% (0.0007) which indicate that housing finance contribute to the economic growth of Namibia.

Most of the commercial banks operating in Namibia are branches of South Africa Commercial banks. The banks are well capitalized, credit to the mortgage sector is given adequate attention. Hence it has been argued that Namibia has one of the most vibrant housing finance market in sub-Sahara Africa, next only to South Africa. Mortgage interest rate 10.5% per annum while average mortgage percentage of GDP is 23.85 percent for the period under study.

The procedure for properly registration involves 8 procedures while properly registration takes 52 days. Cost of registration is 13.8 percent of properly value. This is relatively high when compared to Morocco where it is 5.90 percent of the properly value (CAHF, 2015).

Beside the commercial banks, there are other institutions such as development bank micro finance banks insurance companies that grant credit to the mortgage market.

The findings on objective seven is in line with recent studies by Afrane, Owusu-Manu, Donkor-Hyiaman & Bondinuba (2014), Doling Vandenberg & Telentino (2013) and CAHF (2015).

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CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The findings of this study from the specific objectives are as follows:

1. That there is no significant relationship between mortgage bank outstanding housing loan and real GDP in Kenya
2. That there is no significant relationship between commercial bank outstanding housing loan and real GDP in Nigeria
3. That there is no significant relationship between mortgage bank outstanding housing loan and real GDP in Kenya
4. That there is no significant relationship between commercial bank outstanding housing loan and real GDP in Nigeria
5. Housing finance share a positive and significant relationship with real GDP in Burundi
6. Housing finance share a positive and significant relationship with real GDP in Morocco
7. Housing finance share a positive and significant relationship with real GDP in Namibia

5.2 CONCLUSION

The theoretical basis of this study is drawn mainly from the convergence theory which states that as societies become increasingly industrialized, they begin to resemble other industrialized societies. According to Kemeny and Lowe, convergence theory plays a central role in housing studies. They argued that since the 1970s, the majority of European and other developed countries around the world are converging or evolving away from state intervention principles towards private market-based economies. The implication is that a continuous dependence on government only to fund the housing finance market will not yield the needed growth in the African continent. The private sector should actively participate in the housing finance market through the introduction of product to be traded in the capital market. Products such as mortgage backed securities and government mortgage securities and government mortgage bonds should be traded in African housing finance markets.

In line with the objectives some of the factors identified as hindrances to housing finance contribution to economic growth in Africa, when compared to the developed nations are:

1. High interest rate. The interest rates are so high that most people within the low and medium income cannot afford mortgage loan.
2. Low income wage. Salaries and wages across African countries are generally poor. Most people live on about one dollar a day. In effect, only the few at the upper level of income can participate in housing finance market.
3. Limited products in the housing finance market. There are not enough products to be traded in the market.

However, the case of Namibia should that apart from the three points mentioned above there are other factors militating against low positive impact of housing finance on economic growth of Africa. There was no correlation between change in interest and change in percentage of housing loan as a percentage of GDP in Namibia. Given the scenario, the other factors are population growth without corresponding growth in income, high cost for acquiring land and land tenure system. In Africa, land are owned by community or individuals. Others are long stages involved in obtaining title at the land registrar, high cost of documentation and high cost of building materials.

5.3 RECOMMENDATIONS

In line with the specific objectives of this study we recommend as follows:

1. That African governments should put in place a co-ordinated policy direction housing.
2. Mortgage Backed Securities (MBS) should be introduced in the capital market. The revenue generated through the MBS can then be given out as housing loans at preferential interest rate.
3. The Kenya government should create an enabling environment so as to attract foreign and local investors in the housing finance sectors. As at now there appears to be low level of awareness of the housing finance market in Kenya.
4. The Nigerian government should create an enabling environment so as to attract foreign and local investors in the housing finance sectors. As at now there appears to be low level of awareness of the housing finance market in Nigeria.

5.4 CONTRIBUTION TO KNOWLEDGE

In terms of literature, the study lends credence to previous studies on housing finance. Thereby taking position that housing finance, comparatively is more three regions out of the five regions of Africa. The regions with relatively developed housing finance market are Southern Northern and Central African regions. While East and West African regions have lesser developed market. Similarly, the study also exposes the hindrances to African housing finance market from contributing optimally to economic growths in African as obtainable in developed continents.

5.5 RECOMMENDATION FOR FURTHER STUDIES

This study does not claim to be exhaustive, especially when view against the background that research is concerned with revealing new knowledge as they unfold. It is on this basis that researcher recommend the following for further studies:

1. To examine ways to make the housing finance market competitive so as to attract both foreign and local investors.
2. To determine ways and means through which the housing finance market could properly be incorporated into the capital market.

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APPENDIX I

UNIT ROOT TEST RESULT

Kenya

Null Hypothesis: D(LNRGDP) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.133866	0.0441
Test critical values:		
1% level	-3.920350	
5% level	-3.065585	
10% level	-2.673459	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 16

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNRGDP,2)

Method: Least Squares

Date: 07/25/16 Time: 20:39

Sample (adjusted): 1999 2014

Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRGDP(-1))	-0.832870	0.265764	-3.133866	0.0073
C	0.021053	0.020687	1.017704	0.3261
R-squared	0.412286	Mean dependent var		0.002290
Adjusted R-squared	0.370307	S.D. dependent var		0.099814
S.E. of regression	0.079206	Akaike info criterion		-2.117066
Sum squared resid	0.087830	Schwarz criterion		-2.020492
Log likelihood	18.93653	Hannan-Quinn criter.		-2.112121
F-statistic	9.821118	Durbin-Watson stat		2.037924
Prob(F-statistic)	0.007323			

Null Hypothesis: D(LNMBOHL) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.719973	0.0085
Test critical values:		
1% level	-4.582648	
5% level	-3.320969	
10% level	-2.801384	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 8

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNMBOHL,2)
Method: Least Squares
Date: 07/25/16 Time: 20:41
Sample (adjusted): 2007 2014
Included observations: 8 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNMBOHL(-1))	-0.780606	0.165384	-4.719973	0.0052
D(LNMBOHL(-1),2)	0.411622	0.194783	2.113228	0.0883
C	0.191320	0.038919	4.915903	0.0044
R-squared	0.832142	Mean dependent var		0.033686
Adjusted R-squared	0.764999	S.D. dependent var		0.100268
S.E. of regression	0.048607	Akaike info criterion		-2.930106
Sum squared resid	0.011813	Schwarz criterion		-2.900316
Log likelihood	14.72042	Hannan-Quinn criter.		-3.131032
F-statistic	12.39357	Durbin-Watson stat		2.112410
Prob(F-statistic)	0.011544			

Null Hypothesis: D(LNCBOHL) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.149469	0.0283
Test critical values:		
1% level	-4.800080	
5% level	-3.791172	
10% level	-3.342253	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 14

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNCBOHL,2)
 Method: Least Squares
 Date: 07/25/16 Time: 20:45
 Sample (adjusted): 2001 2014
 Included observations: 14 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNCBOHL(-1))	-1.979764	0.477113	-4.149469	0.0025
D(LNCBOHL(-1),2)	0.859813	0.325266	2.643412	0.0268
D(LNCBOHL(-2),2)	0.565015	0.255597	2.210567	0.0544
C	-0.694442	0.287587	-2.414718	0.0389
@TREND(1985)	0.045233	0.015007	3.014082	0.0146
R-squared	0.690216	Mean dependent var		0.021767
Adjusted R-squared	0.552535	S.D. dependent var		0.213824
S.E. of regression	0.143033	Akaike info criterion		-0.779026
Sum squared resid	0.184127	Schwarz criterion		-0.550792
Log likelihood	10.45318	Hannan-Quinn criter.		-0.800154
F-statistic	5.013133	Durbin-Watson stat		2.373388
Prob(F-statistic)	0.021046			

Null Hypothesis: D(LNTHLPTL) has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.088368	0.0043
Test critical values:		
1% level	-2.717511	
5% level	-1.964418	
10% level	-1.605603	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 16

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNTHLPTL,2)
 Method: Least Squares
 Date: 07/25/16 Time: 20:46
 Sample (adjusted): 1999 2014
 Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTHLPTL(-1))	-0.778777	0.252165	-3.088368	0.0075
R-squared	0.388699	Mean dependent var		0.000467
Adjusted R-squared	0.388699	S.D. dependent var		0.183777
S.E. of regression	0.143688	Akaike info criterion		-0.981887
Sum squared resid	0.309692	Schwarz criterion		-0.933600
Log likelihood	8.855097	Hannan-Quinn criter.		-0.979414
Durbin-Watson stat	1.897840			

APPENDIX II

UNIT ROOT TEST RESULT

NIGERIA

Null Hypothesis: D(LNCBOHL) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.550123	0.0025
Test critical values:		
1% level	-5.295384	
5% level	-4.008157	
10% level	-3.460791	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 10

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNCBOHL,2)
Method: Least Squares
Date: 07/25/16 Time: 21:24
Sample (adjusted): 1988 2014
Included observations: 10 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNCBOHL(-1))	-1.943506	0.296713	-6.550123	0.0006
D(LNCBOHL(-1),2)	0.810255	0.179621	4.510916	0.0041
C	0.196200	0.067261	2.916999	0.0267
@TREND(1985)	-0.007523	0.003627	-2.073884	0.0834
R-squared	0.879793	Mean dependent var		0.014966
Adjusted R-squared	0.819689	S.D. dependent var		0.289695
S.E. of regression	0.123014	Akaike info criterion		-1.063870
Sum squared resid	0.090794	Schwarz criterion		-0.942836
Log likelihood	9.319351	Hannan-Quinn criter.		-1.196644
F-statistic	14.63790	Durbin-Watson stat		1.194494
Prob(F-statistic)	0.003624			

Null Hypothesis: D(LNMBOHL) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.021597	0.0253
Test critical values:		
1% level	-4.498307	
5% level	-3.658446	
10% level	-3.268973	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNMBOHL,2)
Method: Least Squares
Date: 07/25/16 Time: 21:31
Sample (adjusted): 1995 2014
Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNMBOHL(-1))	-1.156382	0.287543	-4.021597	0.0010
D(LNMBOHL(-1),2)	0.532993	0.231651	2.300843	0.0352
C	0.507336	0.570602	0.889125	0.3871
@TREND(1985)	-0.011704	0.027862	-0.420071	0.6800
R-squared	0.508374	Mean dependent var		-0.076787
Adjusted R-squared	0.416194	S.D. dependent var		0.939804
S.E. of regression	0.718078	Akaike info criterion		2.352379
Sum squared resid	8.250174	Schwarz criterion		2.551526
Log likelihood	-19.52379	Hannan-Quinn criter.		2.391255
F-statistic	5.515026	Durbin-Watson stat		1.877063
Prob(F-statistic)	0.008541			

Null Hypothesis: D(LNRGDP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 2 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.281009	0.0001
Test critical values:		
1% level	-4.356068	
5% level	-3.595026	
10% level	-3.233456	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNRGDP,2)
Method: Least Squares
Date: 07/25/16 Time: 21:33
Sample (adjusted): 1989 2014
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRGDP(-1))	-2.590655	0.412458	-6.281009	0.0000
D(LNRGDP(-1),2)	1.117219	0.282143	3.959761	0.0007
D(LNRGDP(-2),2)	0.500829	0.182220	2.748492	0.0120
C	-0.010019	0.057972	-0.172821	0.8644
@TREND(1985)	0.004356	0.003317	1.313480	0.2032
R-squared	0.758076	Mean dependent var		0.003703
Adjusted R-squared	0.711996	S.D. dependent var		0.226501
S.E. of regression	0.121554	Akaike info criterion		-1.205875
Sum squared resid	0.310283	Schwarz criterion		-0.963933
Log likelihood	20.67637	Hannan-Quinn criter.		-1.136205
F-statistic	16.45106	Durbin-Watson stat		1.807808
Prob(F-statistic)	0.000003			

Null Hypothesis: D(LNTHLPGP) has a unit root
Exogenous: Constant, Linear Trend
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.212128	0.0133
Test critical values: 1% level	-4.339330	
5% level	-3.587527	
10% level	-3.229230	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNTHLPGP,2)
Method: Least Squares
Date: 07/25/16 Time: 21:34
Sample (adjusted): 1988 2014
Included observations: 27 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTHLPGP(-1))	-0.956625	0.227112	-4.212128	0.0003
D(LNTHLPGP(-1),2)	0.403076	0.192696	2.091776	0.0477
C	-0.494883	0.406900	-1.216229	0.2362
@TREND(1985)	0.030623	0.023166	1.321892	0.1992
R-squared	0.439334	Mean dependent var		-0.002162
Adjusted R-squared	0.366203	S.D. dependent var		1.091928
S.E. of regression	0.869299	Akaike info criterion		2.693693
Sum squared resid	17.38064	Schwarz criterion		2.885669
Log likelihood	-32.36486	Hannan-Quinn criter.		2.750778
F-statistic	6.007542	Durbin-Watson stat		2.076559
Prob(F-statistic)	0.003538			

APPENDIX III

UNIT ROOT TEST RESULT

Morocco

Null Hypothesis: D(LNLTNTR) has a unit root

Exogenous: None

Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.317507	0.0002
Test critical values:		
1% level	-2.679735	
5% level	-1.958088	
10% level	-1.607830	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNLTNTR,2)

Method: Least Squares

Date: 07/25/16 Time: 16:30

Sample (adjusted): 1987 2014

Included observations: 21 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNLTNTR(-1))	-0.803479	0.186098	-4.317507	0.0003
R-squared	0.477851	Mean dependent var		-0.005882
Adjusted R-squared	0.477851	S.D. dependent var		0.064202
S.E. of regression	0.046392	Akaike info criterion		-3.256929
Sum squared resid	0.043044	Schwarz criterion		-3.207190
Log likelihood	35.19776	Hannan-Quinn criter.		-3.246134
Durbin-Watson stat	1.891100			

Null Hypothesis: D(LNRGDP) has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.821403	0.0004
Test critical values:		
1% level	-2.650145	
5% level	-1.953381	
10% level	-1.609798	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNRGDP,2)
 Method: Least Squares
 Date: 07/25/16 Time: 16:31
 Sample (adjusted): 1987 2014
 Included observations: 28 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRGDP(-1))	-0.696904	0.182369	-3.821403	0.0007
R-squared	0.350986	Mean dependent var		-0.000137
Adjusted R-squared	0.350986	S.D. dependent var		0.022763
S.E. of regression	0.018338	Akaike info criterion		-5.124577
Sum squared resid	0.009080	Schwarz criterion		-5.076999
Log likelihood	72.74408	Hannan-Quinn criter.		-5.110032
Durbin-Watson stat	2.179216			

Null Hypothesis: D(LNTHLPGDP) has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.461988	0.0244
Test critical values:		
1% level	-5.124875	
5% level	-3.933364	
10% level	-3.420030	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 11

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNTHLPGDP,2)

Method: Least Squares

Date: 07/25/16 Time: 16:34

Sample (adjusted): 2004 2014

Included observations: 11 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTHLPGDP(-1))	-2.306235	0.516863	-4.461988	0.0029
D(LNTHLPGDP(-1),2)	0.730472	0.312300	2.339009	0.0519
C	0.528542	0.239386	2.207905	0.0630
@TREND(1985)	-0.015312	0.009455	-1.619541	0.1494
R-squared	0.788575	Mean dependent var		-0.021366
Adjusted R-squared	0.697964	S.D. dependent var		0.176800
S.E. of regression	0.097165	Akaike info criterion		-1.549521
Sum squared resid	0.066087	Schwarz criterion		-1.404832
Log likelihood	12.52237	Hannan-Quinn criter.		-1.640727
F-statistic	8.702888	Durbin-Watson stat		1.541747
Prob(F-statistic)	0.009246			

Null Hypothesis: D(LNTOHL) has a unit root
Exogenous: None
Lag Length: 1 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.249296	0.0007
Test critical values: 1% level	-2.816740	
5% level	-1.982344	
10% level	-1.601144	

*MacKinnon (1996) one-sided p-values.
Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 10

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNTOHL)
Method: Least Squares
Date: 07/25/16 Time: 16:36
Sample (adjusted): 2005 2014
Included observations: 10 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTOHL(-1))	-2.041286	0.480382	-4.249296	0.0028
D(LNTOHL(-1))	0.609225	0.295041	2.064878	0.0728
R-squared	0.742268	Mean dependent var		-0.005338
Adjusted R-squared	0.710052	S.D. dependent var		0.213767
S.E. of regression	0.115107	Akaike info criterion		-1.309060
Sum squared resid	0.105996	Schwarz criterion		-1.248543
Log likelihood	8.545302	Hannan-Quinn criter.		-1.375447
Durbin-Watson stat	1.833248			

Null Hypothesis: D(LNTOL) has a unit root
Exogenous: None
Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.383711	0.0031
Test critical values:		
1% level	-2.792154	
5% level	-1.977738	
10% level	-1.602074	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
and may not be accurate for a sample size of 11

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LNTOL)
Method: Least Squares
Date: 07/25/16 Time: 16:39
Sample (adjusted): 2004 2014
Included observations: 11 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTOL(-1))	-1.124514	0.332332	-3.383711	0.0070
R-squared	0.532789	Mean dependent var		0.008873
Adjusted R-squared	0.532789	S.D. dependent var		0.200991
S.E. of regression	0.137383	Akaike info criterion		-1.045585
Sum squared resid	0.188740	Schwarz criterion		-1.009413
Log likelihood	6.750718	Hannan-Quinn criter.		-1.068387
Durbin-Watson stat	1.917452			

APPENDIX IV

UNIT ROOT TEST RESULT

Namibia

Null Hypothesis: D(LNINTR) has a unit root

Exogenous: Constant

Lag Length: 2 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.417085	0.0027
Test critical values:		
1% level	-3.808546	
5% level	-3.020686	
10% level	-2.650413	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(LNINTR,2)

Method: Least Squares

Date: 07/25/16 Time: 17:11

Sample (adjusted): 1995 2014

Included observations: 20 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNINTR(-1))	-1.513563	0.342661	-4.417085	0.0004
D(LNINTR(-1),2)	0.640498	0.255128	2.510498	0.0232
D(LNINTR(-2),2)	0.481299	0.218624	2.201490	0.0427
C	-0.059171	0.026135	-2.264054	0.0378
R-squared	0.573689	Mean dependent var		0.005173
Adjusted R-squared	0.493755	S.D. dependent var		0.134429
S.E. of regression	0.095648	Akaike info criterion		-1.679437
Sum squared resid	0.146375	Schwarz criterion		-1.480290
Log likelihood	20.79437	Hannan-Quinn criter.		-1.640561
F-statistic	7.177083	Durbin-Watson stat		1.949904
Prob(F-statistic)	0.002869			

Null Hypothesis: D(LNRGDP) has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.846928	0.0089
Test critical values:		
1% level	-2.792154	
5% level	-1.977738	
10% level	-1.602074	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 11

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNRGDP,2)
 Method: Least Squares
 Date: 07/25/16 Time: 17:17
 Sample (adjusted): 2004 2014
 Included observations: 11 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNRGDP(-1))	-0.569615	0.200080	-2.846928	0.0173
R-squared	0.409610	Mean dependent var		-0.031423
Adjusted R-squared	0.409610	S.D. dependent var		0.125552
S.E. of regression	0.096470	Akaike info criterion		-1.752655
Sum squared resid	0.093065	Schwarz criterion		-1.716483
Log likelihood	10.63960	Hannan-Quinn criter.		-1.775456
Durbin-Watson stat	2.163766			

Null Hypothesis: D(LNTOHL) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=2)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.704730	0.0007
Test critical values: 1% level	-4.057910	
5% level	-3.119910	
10% level	-2.701103	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 13
 Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(LNTOHL,2)
 Method: Least Squares
 Date: 07/25/16 Time: 17:21
 Sample (adjusted): 2002 2014
 Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTOHL(-1))	-1.399279	0.245284	-5.704730	0.0001
C	0.247504	0.083706	2.956833	0.0130
R-squared	0.747382	Mean dependent var		0.024009
Adjusted R-squared	0.724416	S.D. dependent var		0.508054
S.E. of regression	0.266708	Akaike info criterion		0.335316
Sum squared resid	0.782467	Schwarz criterion		0.422232
Log likelihood	-0.179556	Hannan-Quinn criter.		0.317451
F-statistic	32.54394	Durbin-Watson stat		1.969850
Prob(F-statistic)	0.000137			

Null Hypothesis: D(LNTHLPTL) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.602471	0.0219
Test critical values:		
1% level	-4.057910	
5% level	-3.119910	
10% level	-2.701103	

*MacKinnon (1996) one-sided p-values.

Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 13

Augmented Dickey-Fuller Test Equation

9Dependent Variable: D(LNTHLPTL,2)

Method: Least Squares

Date: 07/25/16 Time: 17:26

Sample (adjusted): 2002 2014

Included observations: 13 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNTHLPTL(-1))	-1.086686	0.301650	-3.602471	0.0042
C	0.050415	0.060393	0.834790	0.4216
R-squared	0.541242	Mean dependent var		-0.002971
Adjusted R-squared	0.499537	S.D. dependent var		0.298392
S.E. of regression	0.211092	Akaike info criterion		-0.132403
Sum squared resid	0.490160	Schwarz criterion		-0.045488
Log likelihood	2.860621	Hannan-Quinn criter.		-0.150268
F-statistic	12.97780	Durbin-Watson stat		2.042301
Prob(F-statistic)	0.004152			