EFFECTS OF SUPPLY SIDE INSTITUTIONAL ROLES ON HOUSING AFFORDABILITY AMONG THE LOW INCOME EARNERS IN KENYA

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Effects of Supply Side Institutional Roles on Housing Affordability among the Low Income Earners in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University

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DEDICATION

This thesis is dedicated to my wife Irene Wambui for her understanding, support and encouragement over the entire period of my study. I also dedicate it to my children Dan Kibe and Debra Wanjiku for their patience and sacrifice during the entire period of my study. Further dedication is to my late mother Teresia Wanjiku Kibati for teaching me the virtue of hard work and of remaining focused when pursuing selected goals in life, ideals without which this work would not have been accomplished.

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ABSTRACT

Kenya has recognized the right to housing in the new constitution, stating that every person has the right to "accessible and adequate housing and reasonable standard of sanitation". However, the country has an annual deficit of 156,000 housing units of which a deficit of 124,800 housing units is on the low income housing market segment. The country has a total deficit of 2,000,000 housing units of which a large proportion of the deficit is in the low income housing market segment. Due to this shortage of housing, Kenya is facing an increasing growth of informal settlements in her urban centers. Of the country's total population that lives in urban areas, a large proportion is confined in informal settlements. The country's annual informal settlements growth rate is one of the highest in the world and it is likely to double in the next 30 years if positive intervention measures are not put in place. The housing problem in Kenya for the low income earner is twofold. First, the houses built are too expensive for their affordability and two, the mortgage payment rates are too high for their affordability. The high mortgage rates are negatively affecting both the home buyers and rental property buyers. High mortgage rates cause the land lords to increase the rents so as to offset the high mortgage repayments. This causes the ones who cannot afford the high rents to turn to informal settlements for their housing needs. This research was intended to assist the stakeholders of the housing industry in Kenya to identify ways of increasing housing affordability among low income earners. Various studies have been done focusing on demand factors which influence housing affordability among the low income earners in Kenya. This study therefore sought to analyze the effects of supply side institutional roles on housing affordability among the low income earners in Kenya. The study therefore pursued the following specific objectives; To analyze the effects of the role of the National Government housing policy on housing affordability among the low income earners in Kenya; To assess the effects of the role of the county government housing policy on housing affordability among the low income earners in Kenya; To evaluate the effects of the role of the mortgage distribution channels on housing affordability among the low income earners in Kenya and to assess the effects of the role of the property developers on housing affordability among the low income earners in Kenya. Analytical research design was used in the study. The target population was 300.The sample size was 168.Stratified random sampling method was used. Primary data was used and questionnaires were used to collect the data. The questionnaires were pretested before launching the main study. Drop and pick method was used. The data was processed using various processes which included; validation, sorting, summarization and aggregation. The data collected was analyzed using inferential statistics and descriptive statistics using the IBM SPSS Statistics 20.0.1(March, 2012).The descriptive statistics that were used was the frequencies and mean. The inferential statistics involved the use of Pearson's correlation and regression analysis. The study established that there exists a significant positive relationship between the independent variables namely; effects of the role of the National Government housing policy, effects of the role of the mortgage distribution channels, effects of the role of the property developers and the dependent variable, housing affordability among the low income earners in Kenya. The study established that the effects of the role of the County Governments housing policy was not significant in influencing housing affordability among the low income earners in Kenya. The study established that the independent variable with the highest predictive power over housing affordability among the low income earners in Kenya was the effects of the role of the National Government. The study recommends participation of all stakeholders in the formulation, review, repeal and amendment of the existing legal framework governing operations of the housing sector and tax rebates as well as incentives to motivate developers leading to increased investment in low income housing. The results indicated that the activities put in place by the County Governments in the implementation of housing policy do not influence housing affordability among low income earners in Kenya. It is also recommended that the property developers should increase their capacity to deliver housing units in larger quantities as this would enable them enjoy economies of scale. They should use technology that is available locally to drive supply of housing stocks in a sustainable way. They should eliminate the use of deposits as their major source of funds.

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ABBREVIATIONS AND ACRONYMS

AAPOR	America Association for Public Opinion Research
ABS	Asset-Backed Securities
CAHF	Centre for Affordable Housing Finance in Africa
CBD	Central Business District
CMA	Capital Markets Authority
CMOs	Collateralized Mortgage Obligations
GOB	Government Owned Bank
GSS	Global Shelter Strategy (to the year 2000)
HFCK	Housing Finance Company of Kenya
HMF	Housing Micro Finance
IUHF	International Union for Housing Finance
KCB	Kenya Commercial Bank Limited
KNBS	Kenya National Bureau of Statistics
NACHU	National Co-operative Housing Union
NGO	Non Governmental Organization
NHC	National Housing Corporation
OECD	The Organization for Economic Co-operation and Development
REHDA	Real Estate and Housing Developers' Association Malaysia
RMBS	Residential-Mortgage-Backed Securities

SEWA	Self-employed Women's Association
SPSS	Statistical Package for Social Scientists
UNCSH	United Nations Center for Human Settlements
UNDP	United Nations Development Programme
UN-Habitat	United Nations Centre for Human Settlement
USAID	United States Agency for International Development
VAT	Value Added Tax

DEFINITION OF KEY TERMS

Affordable Housing for Low Income Earner: A low income house means a house put up at a construction cost of not more than Kshs. 1,600,000 and of plinth area of not less than 30 square metres (Kenya Revenue Authority, 2012) .

Asset-Backed Securities: Securities backed by other types of receivables other than mortgages (Rajapakse, 2006).

County Governments Housing Function: The role of the County Governments on housing as indicated in the fourth schedule of the Constitution has been adopted. The fourth schedule of the Constitution indicates that the County Governments has been given responsibility for county planning and development, including housing. Counties will largely be responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans. County Governments will majorly deal with actualizing the framework by way of implementation (Republic of Kenya, 2010).

Fogarim: A government central guarantee programme in Morocco which guarantees 70 percent of each bank mortgage loan to low-income individuals with irregular incomes who would normally not be eligible for these loans (McVitty, 2012).

High Income Earners: The definition of The National Bureau of Statistics has been adopted. It defines high-income households as those whose monthly incomes are above Sh120, 000 (KNBS, 2010).

Housing Affordability: Not spending more than 30-35 % of a family’s income on housing expenditures. Families who pay more than 30 – 35 % of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care (Quigley & Raphael, 2004, Hurt,2010).

Housing Micro finance: Housing microfinance is primarily the provision of unsecured microcredit, but may include other related financial services such as access to savings, remittances, and micro-insurance to meet the demand of low-income households to repair or improve their existing homes or build their own homes incrementally one loan at a time. These loans may also require mandatory savings. Housing microfinance loans are normally offered by microfinance organizations and housing cooperatives (Mesarina & Christy, 2007).

Interest rate: Interest rate is the interest rate charged by banks on loans to private sector customers (World Bank, 2014).

Low Income Earners: The definition of The National Bureau of Statistics has been adopted. It classifies middle-income households as those whose monthly incomes are below Ksh 23 672 (KNBS, 2010).

Low Income Housing Project: A Low income housing project means a project of not less than 20 housing units intended for low income earners (Kenya Revenue Authority, 2012)

Middle Income Earners: The definition of The National Bureau of Statistics has been adopted. It defines middle-income households as those whose monthly incomes fall between Ksh 23, 672 and Sh119, 999 (KNBS, 2010).

Mortgage Funding Sources: This refers to the sources of funds of the mortgage loan providers

National Government Housing Function: The role of the National Government on housing as indicated in the fourth schedule of the Constitution has been adopted. The fourth schedule of the Constitution indicates that the National Government has been put in charge of Housing policy. ie It is in charge of housing regulatory framework (Republic of Kenya, 2010).

Property Developers: Thalmann (2006) segregates private property developers into 'market developers', those who build housing units to sell on to end-users at a profit and 'investor developers', those who build with a view to keep ownership of the completed building. The area of focus for this research is market developers.

Residential Mortgage Backed Securities: Securities backed by residential mortgage receivables (Rajapakse, 2006).

Securitization: Securitization is the financial practice of pooling various types of contractual debt, such as residential mortgages, commercial mortgages, auto loans, or credit card debt obligations, and selling the said consolidated debt as pass-through securities or CMOs to various investors. The cash collected from the financial instruments underlying the security is paid to the various investors who had advanced money for that right (Hahn, 2012).

Slums/Informal Settlements: The definition of United Nations has been adopted. The United Nations characterizes slums/informal settlements by one or more of the following; poor structural quality and durability of housing; insufficient living areas (more than three people sharing a room); lack of secure tenure; poor access to water and lack of sanitation facilities (UN-Habitat, 2003).

Supply Institutional Roles on Housing Affordability: These are roles of the institutions that have been identified as important in influencing the level of new house building and housing affordability. These are the National Government through direct capital investment for public housing, the County Governments through support for production and consumption of housing, the lenders of finance and the property developers in the private sector (Ambrose & Barlow, 1987).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The availability of affordable housing has been described as being "central to supporting a decent life - entailing the maintenance of stable households connected to the main institutions in our society" (Berry, 2002). This is consistent with overwhelming evidence that housing has a significant influence on, and is a significant driver of life fulfillment and quality of life (Garner, 2006).In the past several decades, some countries have made tremendous progress in meeting the housing needs of their nations, while others still face great challenges of severe housing shortage, substandard housing and slums (UN-Habitat,2008a).

The effects of unaffordable housing are demonstrated by the proliferation of informal settlements (UN-Habitat, 2010).The majority of the urban poor lives in unplanned and unserviced informal settlements. In 2005, over one third (37 per cent) of the urban population in developing countries lived in slums, and UN-Habitat estimates that by 2020, the world slum population will reach almost 1 billion (UN-Habitat, 2010). In Kenya, ten million people live in urban areas (UNDP, 2007). Of this population, more than 71% is confined in informal settlements (World Bank, 2011).Kenya's annual informal settlements growth rate of 5%, is the highest in the world (UNDP, 2007).

The effects of National Governments through their policies in solving housing affordability problems have been acknowledged by UN Habitat (2008b).UN Habitat (2008b) posits that governments have shaped our cities, towns and villages in the past through their policies and that decision-makers face challenges of designing policies that allow their countries and cities to meet the increasing human settlements challenges. They assert that governments can play an important role in housing finance affordability to the low income earners through legislation measures such as provision of guarantees and subsidies and non legislation measures.

The effects of National Government housing policy in solving housing affordability problems in Morocco have been immense where partnership between banks and the government make lending more accessible through the Fogarim program. Fogarim is a mortgage guarantee fund for households with small and irregular income. Key features of Fogarim are to guarantee 70% of a loan that a bank makes to a household with informal income (McVitty, 2012).The effect of the government guarantee is to lower the interest rates. The borrowers end up being charged a low rate of interest, often around 6%, compared to 3-4% for high-income borrowers who already have collateral which the banks would otherwise not allow (McVitty, 2012). Contractors also benefit from the fund to build low-cost housing units and sell them for low prices (Belhaj, 2008).In China, for people living in the slums, a 'one-time' equity grant based on the market value of their existing housing are given to enable them to access mortgage instruments. Developers are provided incentives in the form of tax reductions or tax exemptions. As a result, China has developed more than 20 million housing units during the last five years (Manoj, 2010).

The effects the National Government housing policy in solving housing affordability problems are evident in Malaysia, where the government has made low-cost housing a mandatory section of housing development abided by housing developers who have to provide 30% of their total housing development for low-cost housing (Aziz, 2007; REHDA, 2008). The policy is imposed through administrative procedures that force developers to provide a portion of development for low-cost housing in order to gain development approval by local authorities (Aziz, 2007; REHDA, 2008). Brazil, Egypt, Mexico, and Tunisia also have recorded success stories in provision of housing for low income earners. In all these countries, the respective central government has been in the 'driving seat' in the implementation of inclusive policies for housing, land reforms and regularization. Governments in some low-income or middle-income countries like Colombia, El Salvador, Philippines, Indonesia, Myanmar and Sri Lanka, have managed to prevent slum formation by anticipating and planning for growing urban populations by investing in low-cost and affordable housing (Manoj, 2010).

The effects of County Governments housing policy on affordable housing has been demonstrated in the USA where there are now 24 states with legislation authorizing or mandating local governments to incorporate affordable housing into their land use plans, with California, Massachusetts, New York, New Jersey and Washington D.C. the most active with on inclusionary zoning (Gurran et al, 2007). Montgomery County Ohio, with an estimated 400 new units per year, is regarded to be one of the most effective schemes (Gurran et al, 2007). In the vast majority of schemes, incentives are available to offset the financial burden of the contribution. Most authorities offer a combination of incentives which may include variations on subdivision, building design, parking, or landscaping requirements, permit and service fee waivers, and expedited processing of applications (Anderson, 2005)

The effects of County Governments housing policy on affordable housing has been demonstrated in Ireland where in recent years there has been a number of reforms to planning in Ireland intended to streamline the system, remove impediments to expediting housing output and also to strengthen development planning (Norris & Shiels, 2007). National legislation was introduced through the Planning and Development Act (2000) to enable local authorities to require developers to contribute to social and affordable housing (Brooke, 2006). The act uses planning gain mechanisms to deliver housing for rent and sale to low-income households (Norris & Shiels, 2007).

Under the legislation, local authorities must amend their development plans to include housing strategies that detail how future housing demand will be met, including the need for social housing to rent and affordable housing for sale to low and moderate income households at below market value. Local authorities must require 20 per cent of residential land be used for social and affordable housing and that this be provided by developers as a condition of planning approval. The contribution can either be made through cash compensation and/or dwellings, land or housing sites in alternative locations. A review completed in 2006 estimated that 962 affordable housing units were developed in 2005 under the mechanism—up from 374 in 2004—which suggests that use of the approach is gaining momentum as it has done in England over time (Brooke, 2006).

The effects of mortgage distribution channels in solving housing affordability problems by availing housing finance have been discussed by Wachter and Green (2000). Mortgage distribution channels can be divided into four major types: depository systems (lending funded by savings), directed credit (including provident funds and raised by taxes), specialized mortgage lending (through government regulated or owned banks or “covered bonds”), and, more recently, lending linked to secondary mortgage market systems achieved through securitization (Wachter & Green, 2000).

The effects of mortgage distribution channels on the affordability of housing in Australia has been acknowledged by Chaplain, Kitson and Thomson (2012) who assert that the Australian mortgage market is characterized by a high level of competition, contracting lending margins, a very low level of loans in arrears, product innovation and the level and rate of refinancing remains high. Depository mortgage distribution channel is dominant in the UK mortgage system where home ownership rate is at 68 percent while Germany uses both depository and securitization. Home ownership in Germany is at 40 percent (IUHF, 2000).In Korea, mortgages are currently funded almost entirely through private depository institutions that have evolved to replace government entities. This is the most common evolving practice in both Asia and Europe of relying on depositories, instead of the securities market, for mortgage funding (Wachter & Green, 2000).In the USA, securitization has provided an important source of funding for residential mortgages across the country, including loans on housing for low- and moderate-income families through Fannie Mae and Freddie Mac (Congress of the United States, 2010).

The effects of housing microfinance as a mortgage distribution channel in making housing finance accessible and affordable to the poor households who are often outside the reach of formal institutional intermediaries in housing finance has been acknowledged (Manoj,2010). Manoj (2010) in his paper titled “Prospects and Problems of Housing Microfinance in India: Evidence from “Bhavanashree” Project in Kerala State asserts that housing microfinance is one of the growing portfolios of MFIs worldwide. In India, to accelerate housing finance for low-income groups the Reserve Bank of India set up the National Housing Bank as a wholly owned subsidiary (LaSalle, 2012)

The effects of property developers on housing have been acknowledged by Ball (1996) in his paper “Investing in New Housing: Lessons for the Future” who suggests that the trigger of development activity is an analysis of market opportunities by developers who see demand for new housing, anticipate adequate return on investment, gear their resources towards purchase of land and housing production and then sell these housing units with a view to maximizing profits. Arvanitis (2013) in his paper titled “African Housing Dynamics: Lessons from the Kenyan Market” posits that building developers’ capacity is paramount for the development of the formal housing sector. He asserts that on the one hand, it will allow them to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale and on the other hand, it will allow them to build better houses, and in safer conditions. The effects of property developers on housing have also been demonstrated by CAHF(2013) in its article titled “Scoping Study: Overview of the Housing Finance Sector in Zambia” where they assert that including the requirement that all future private housing projects include a percentage of housing for lower income groups would increase the supply of low cost housing.

1.1.1 Housing Finance Affordability in Kenya

Mortgage lending in Kenya is predominantly done by Commercial Banks (World Bank, 2011). Overall the two largest lenders namely KCB and HFCK control over half the mortgage market (Central Bank Supervision Report, 2012). Kenyan mortgage borrowers face high interest rates compared to other countries (Kariuki, 2013). Other organizations that undertake mortgage lending in Kenya are nongovernmental organizations like Micro Finance Organizations and Shelter Afrique, Housing Cooperatives and the National Government through the National Housing Corporation.

Available housing finance is inaccessible to Kenya’s low income households (Economic and Social Rights Centre, 2012; Onyango, 2010). The average mortgage loan size increased from Ksh. 4 million in may 2010 to Ksh. 6.4 million in December 2012 (Central Bank Supervisory Report, 2012). Recent statistics released by the World Bank (World Bank, 2011) estimates that approximately 92% of Kenya’s urban population is incapable of affording a mortgage loan while rural incomes are too low to even consider (World Bank, 2011).

Hass Property Index indicated that, of the stock of new houses which were built in 2011, a majority of them at 62 % were out of reach of the mortgage borrowers (Kariuki, 2013). In 2012 the situation became worse with 64 % being out of reach of the mortgage borrowers (Kariuki, 2013).Shelter Afrique has also indicated that Kenya’s mortgage market is only accessible to a “tiny elite” compared to the extent of the need (Economic and Social Rights Centre, 2012). As a result, quality housing remains largely unavailable to the low-income segment of the urban population, which comprises the vast majority of urban dwellers. The current annual housing deficit is estimated at 156,000 units per annum (World Bank, 2011). Currently, 80 per cent of new housing supply in Kenya meets the needs of middle-to-high income households, yet the greatest need is among the low-income households (Economic and Social Rights Centre, 2012). The annual deficit in low income housing is 124,800 housing units. The total housing deficit in Kenya is 2,000,000 housing units (Economic and Social Rights Centre, 2012, World Bank, 2011). In urban areas only a 1/5 th of households live in their own homes, while four-fifths rent (Kariuki, 2013). The current mortgage market is around 1/13 th of the country’s mortgage potential (World Bank, 2011).

The returns in Kenya's property market are usually between 25% to 30% on development (Nachu, 2013). Nairobi was the best performing prime residential market in the world in 2011. Values in the city grew up by 25% in 2011, leaving luxury hotspots such as London, Miami and Hong Kong behind (Knight Frank, 2013). The government of Kenya has been undertaking housing schemes for the civil servants. Under the Civil Servants Housing scheme, a two-bedroom apartment developed by the Government at Ngara was selling for Sh 3.4 million in the housing scheme, while similar homes developed by a private developer in Pangani area, a mile further from the CBD, have been listed at Sh 8 million with the buyers paying for them before the actual construction begins or is ongoing (Capital Mortgages, 2013). The government also provided home loans under the scheme at mortgage rates of five per cent, meaning a buyer in a two-bedroom apartment will repay the loan at about Sh 20, 000 per month with maximum repayment period of 18 years. The mortgage repayment compares well with the rental prices that the targeted cadre of workers would be paying in private-owned homes around the same area (Capital Mortgages, 2013). In a similar civil servants housing scheme at Kilimani in Nairobi, the beneficiaries bought four bed-roomed apartments at a cost of Sh7.3 million per unit with a five percent reducing interest rate against the market price of Sh15 million (Capital Mortgages, 2013).

1.2 Statement of the Problem

The housing affordability problem in Kenya for the low income earner is twofold. The houses built are too expensive for their affordability with the average mortgage loan of Ksh. 6.2 M in 2012 and two, the mortgage payment rates are too high for their affordability. This has caused many Kenyan families to spend more than 30-35 % of their income on housing. Families who pay more than 30 – 35 % of their income for housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care (Quigley & Raphael, 2004, Hurt,2010).

The high mortgage rates are negatively affecting both the home buyers and rental property buyers. The High mortgage rates cause the land lords to increase the rents so as to offset the high mortgage repayments (Kariuki, 2013). This causes the ones who cannot afford the high rents to turn to informal settlements for their housing needs (World Bank, 2011). Currently, 80 per cent of new housing supply meets the needs of middle-to-high income households, yet the greatest need is among the low-income households (Economic and Social Rights Centre, 2012).The country has an annual deficit of 156,000 housing units (World Bank, 2011) of which a deficit of 124,800 housing units is on the low income housing market segment (Economic and Social Rights Centre, 2012).The country has a total deficit of 2,000,000 housing units of which a large proportion of the deficit is in the low income housing market segment (World Bank, 2011). Of Kenya's total population that lives in urban areas, more than 71% is confined in informal settlements (UN Habitat, 2009). Kenya's annual informal settlements growth rate of 5%, is the highest in the world and it is likely to double in the next 30 years if positive intervention measures are not put in place (UNDP, 2007).

The high level of unaffordability of housing for the low income earner has led to the low demand for housing for the low income earners. This has led to low supply of houses for the low income earner as property developers have concentrated their efforts on the middle and high income market segment where there is sufficient demand of housing (Economic and Social Rights Centre, 2012). The deficit in the low income market segment is largely filled by the growth in slum dwellings (World Bank, 2011).

Recent statistics released by the World Bank (World Bank, 2011) estimates that approximately 92% of Kenya's urban population is incapable of affording a mortgage loan while rural incomes are too low to even consider. This is in agreement with the Hass Property Index which indicated that 62% of the stock of new houses which were built in the country in 2011 and 64% of the stock of new houses which were built in the country in 2012 were unaffordable by the mortgage borrowers. Increase in housing affordability for the low income earner would cause property developers to identify the business opportunity (Ball, 1996), increase supply of the low income housing thereby reducing the housing deficit and the growth rate of slums in the country.

Researchers have expressed concern about the orientation in housing affordability policy towards demand-side rather than supply-side measures (Katz, Turner, Brown, Cunningham & Sawyer, 2003; Pomeroy, 2004). Reflecting on housing affordability policy in Canada, Pomeroy (2004) concludes that although there is merit in providing income assistance to private tenants, 'tackling the demand side of the equation alone would not address the lack of new supply that is the cause of rising rents and worsening affordability', and that used in isolation this measure could potentially lead to cost inflation. Therefore, the main purpose of this study was to evaluate the effects of supply side institutional roles on housing affordability among the low income earners in Kenya

1.3 Research Objectives

1.3.1 General Objective

The main objective of this study was to evaluate the effects of supply side institutional roles on housing affordability among the low income earners in Kenya

1.3.2 Specific Objectives

Specifically, the study pursued the following specific objectives:-

i. To analyze the effects of the role of the national government housing policy on housing affordability among the low income earners in Kenya
ii. To assess the effects of the role of the county government housing policy on housing affordability among the low income earners in Kenya
iii. To evaluate the effects of the role of the mortgage distribution channels on housing affordability among the low income earners in Kenya.
iv. To assess the effects of the role of the property developers on housing affordability among the low income earners in Kenya

1.4 Research Hypotheses

i. $Ho_{1:}$ There is no relationship between the effects of the role of the National Government housing policy and housing affordability among the low income earners in Kenya

ii. $Ho_{2:}$ There is no relationship between the effects of the role of the county government housing policy and housing affordability among the low income earners in Kenya

iii. $Ho_{3:}$ There is no relationship between the effects of the role of the mortgage distribution channels and housing affordability among the low income earners in Kenya

iv. $Ho_{4:}$ There is no relationship between the effects of the role of the property developers and housing affordability among the low income earners in Kenya

1.5 Justification of the Study

The findings of this study, conclusions and recommendations are essential for the different entities that are actively involved in the provision of housing to the low income earners. The study revealed the role that can be played by the various supply side institutions on housing affordability among the low income earners in Kenya. This will assist the National Government to appreciate the amendments of the national housing policy that should be put in place to improve housing performance among the low income earners. The National Government can be able to appreciate the legislation role it can play to improve housing performance among the low income earners. The study is also of benefit to the County Governments as it highlights the various measures that should be put in place by the County Governments as the entities that are currently incharge of implementation of the housing policy. The County Governments are largely responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans. The study is also of benefit to the housing microfinance, microfinance institutions, commercial banks and other mortgage distribution channels as it highlights the various measures that they should put in place to successfully offer mortgage to the low income earners in Kenya. This will help address the current annual housing deficit estimated at 156,000 units per annum of which 124,800 housing units affects the low income housing segment. It will also help address the total housing deficit in Kenya which is 2,000,000 housing units.

1.6 Scope of the Study

The study focused on those organizations that influence low income earners housing affordability which are headquartered in Nairobi. These are Ministry of Lands, Housing and Urban Development, the National Treasury, Central Bank of Kenya and CMA representing the National Government, the Ministry of Lands, Housing and Urban Development of the Nairobi County Governments representing the County Governments and Commercial Banks, Microfinance Organizations, Housing Cooperatives, and NHC representing the mortgage distribution channels. The data was collected between May and June 2014.

1.7 Limitations of the Study

The study only dealt with those organizations that influence housing for low income earners which are headquartered in Nairobi County. This however provides opportunity for further research in the other Counties. Some government officers asked to see the authorization letter from National Commission for Science Technology and Innovation as evidence that the research was authorized. This challenge was overcome as soon as the letter was released by the National Commission for Science Technology and Innovation. Initially there was a slow response from the respondents who complained about the length of the questionnaire and also their busy schedules in their daily official engagements. This challenge was overcome by constantly calling the respondents and physically visiting them in their offices. The study focused on the low income earners only.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews theoretical and empirical literature on supply side institutional roles on housing affordability among the low income earners. Based on the literature, a conceptual framework was developed, which forms the basis for data analysis. The chapter is organized as follows: theoretical literature review, conceptual framework, empirical literature review, critique of existing literature, research gap and the chapter summary.

2.2 Theoretical Literature

The theoretical literature available on housing provides various approaches and theories which govern housing provision. They are the regulation theory, the collaborative approach model, theory of monopolistic competition and q theory of housing investment.

2.2.1 Regulation Theory

The theory of economic regulation is an economic theory first developed by Arthur Cecil Pigou (1932) that holds that regulation is supplied in response to the demand of the public for the correction of inefficient or inequitable market practices. Regulation is assumed to benefit society as whole rather than particular vested interests. The regulatory body is considered to represent the interest of the society in which it operates rather than the private interests of the regulators (for recent reviews, see Jessop, 1990; Laffont & Tirole, 1993, 2000; Goodwin, 2001; Levy & Spiller, 1994; Newbery, 1999). The case for economic regulation is premised on the existence of significant market failure resulting from economies of scale and scope in production, from information imperfections in market transactions, from the existence of incomplete markets and externalities, and from resulting income and wealth distribution effects. It has been suggested that market failures may be more pronounced, and therefore the case for public regulation is stronger, in developing countries (Stiglitz, 1998).

In the context of making housing affordable to the low income earners, government regulation is necessary due to the existence of incomplete markets and externalities, and from resulting income and wealth distribution effects.

2.2.2 The Collaborative Approach Model

The Collaborative Approach to housing emerged in the 1980's through the United Nations Centre for Human Settlements. It focused on the limitation of the institutions and the imperfect market, not just the participation of the urban poor (Safler, 1983). In the late 1980s, the United Nations Center for Human Settlements (UNCHS, Habitat) focused on the collaboration among the state, the market, the NGOs and the community to "enhance" the capability of the community (UNCSH, 1990). The approach integrates the concept of good governance and supportive means of housing provision to the solution of low cost housing in the third world cities. The approach considered the well being of the low income communities and their prospect to survive in the city, utilizing housing as means of social mobility. It therefore, focused on the health issues of the dwelling units together with the sufficiency of space for social and economic activities (UNCSH, 1990).

This theory is relevant to this study as it seeks to involve the community within the governance's interactive space to gain support from the state, while looking for practical solutions within the domain of the community's initiative. The lacking aspect in this approach has been the availability of resources and the host agencies to work jointly with the urban poor.

2.2.3 Theory of Monopolistic Competition

The "founding father" of the theory of monopolistic competition is Edward Hastings Chamberlin, who wrote a pioneering book on the subject, Theory of Monopolistic Competition (1933). Monopolistic competition is a type of imperfect competition such that many producers sell products that are differentiated from one another as substitute goods but not perfect substitutes (such as from branding, quality, or location). Monopolistically competitive markets have the following characteristics: There are many producers and many consumers in the market, and no business has total control over the market price. Consumers perceive that there are non-price differences among the competitors' products. There are few barriers to entry and exit. Producers have a degree of control over price. Given these conditions, a monopolistic competition firm faces a downward sloping demand curve. The demand curve is highly elastic although not "flat". This implies that although the firm in monopolistic competition is a price maker, it cannot completely disregard the pricing of the competing firms in the long run.

This theory is applicable in the housing affordability context because the competition among the mortgage distribution channels should lower mortgage interest rates because although the firm in monopolistic competition is a price maker, it cannot completely disregard the pricing of the competing firms in the long run. Therefore even though each mortgage lender has differentiated mortgage loan products and is therefore a price maker it cannot ignore the pricing of the mortgage loan products of the competitors.

2.2.4 Q Theory of Housing Investment

Q theory was put forward by James Tobin in 1969 (Jud & Winkler, 2003).Other recent proponents of Q theory include Hayashi (1982); Fettig, (1996) and Takala and Tuomala (1990). Q theory posits that investment in any asset is a function of the Q ratio: the ratio of the market valuation of the asset to its replacement cost (or marginal cost).If $Q>1$, then a firm should invest; investment should stop when a firm's marginal $Q=1$.If $Q<1$, the firm should not invest because the cost of acquiring an asset in the market is less costly than its purchase (replacement) cost. In the case of housing, arbitrage by consumers between new and existing house markets is what drives housing investment. If for example existing homes are expensive relative to new homes, then housing consumers will demand more new homes. Alternatively if existing homes are cheap relative to new homes then consumers will buy more existing homes and few newer homes.

This theory is relevant to the study because it evaluates the competitive environment where builders and developers are price takers, suppliers respond to the demands of housing consumers, building new homes when existing home prices are high relative to new homes.

Theoretical Basis of This Study

This research will take the position of collaborative approach to discover a possible solution of the provision of housing for the low income earners. There is a body of literature illustrating the success of private-public partnership, by means of cross subsidies and tax incentives, to solve the problems of low income housing needs (Kwitko, 1989). This research thus aims at exploring the social behavior and the extent of ability to pay for housing among the low income earners, the possibility of subsidization within the conventional housing project and the types of incentives being able to motivate the private sector to collaborate with the public sector to provide low-cost housing in the country. Derived from the theoretical setting established in the last section, the conceptual framework below attempts to explain the relationship among variables which link the low income earners and the interests of the private sector. This research hypothesizes that the attributes of low-income earners governs the needs and characteristics of housing on the one hand, and the incentives offered by the national and county governments which would be able to convince the private sector to produce housing stock to meet the needs of low income earners on the other.

2.3 Conceptual Framework

Mugenda (1999) has defined a conceptual framework as a hypothesized model identifying the model under study and the relationships between the dependent variable and independent variables. Kombo and Tromp, (2009) have defined a conceptual framework as a set of broad ideas and principles taken from relevant fields of enquiry and used to structure a subsequent presentation. Smyth (2004) posits that a conceptual framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate it. When clearly articulated, a conceptual framework has potential usefulness as a tool to assist a researcher to make meaning of subsequent findings. The researcher conceptualizes the relationship between independent variables and the dependent variable in the study and shows the relationship graphically or diagrammatically (Smyth, 2004).

The conceptual framework for the present study shows the relationship between the effects of the role of National Government, the effects of the role of County Governments, the effects of the role of mortgage distribution channels, the effects of the role of property developers and the dependent variable namely housing affordability among the low income earners. Figure 2.1 conceptualizes that the effects of the role of National Government, the effects of the role of County Governments, the effects of the role of mortgage distribution channels and the effects of the role of property developers influence housing affordability among the low income in Kenya.

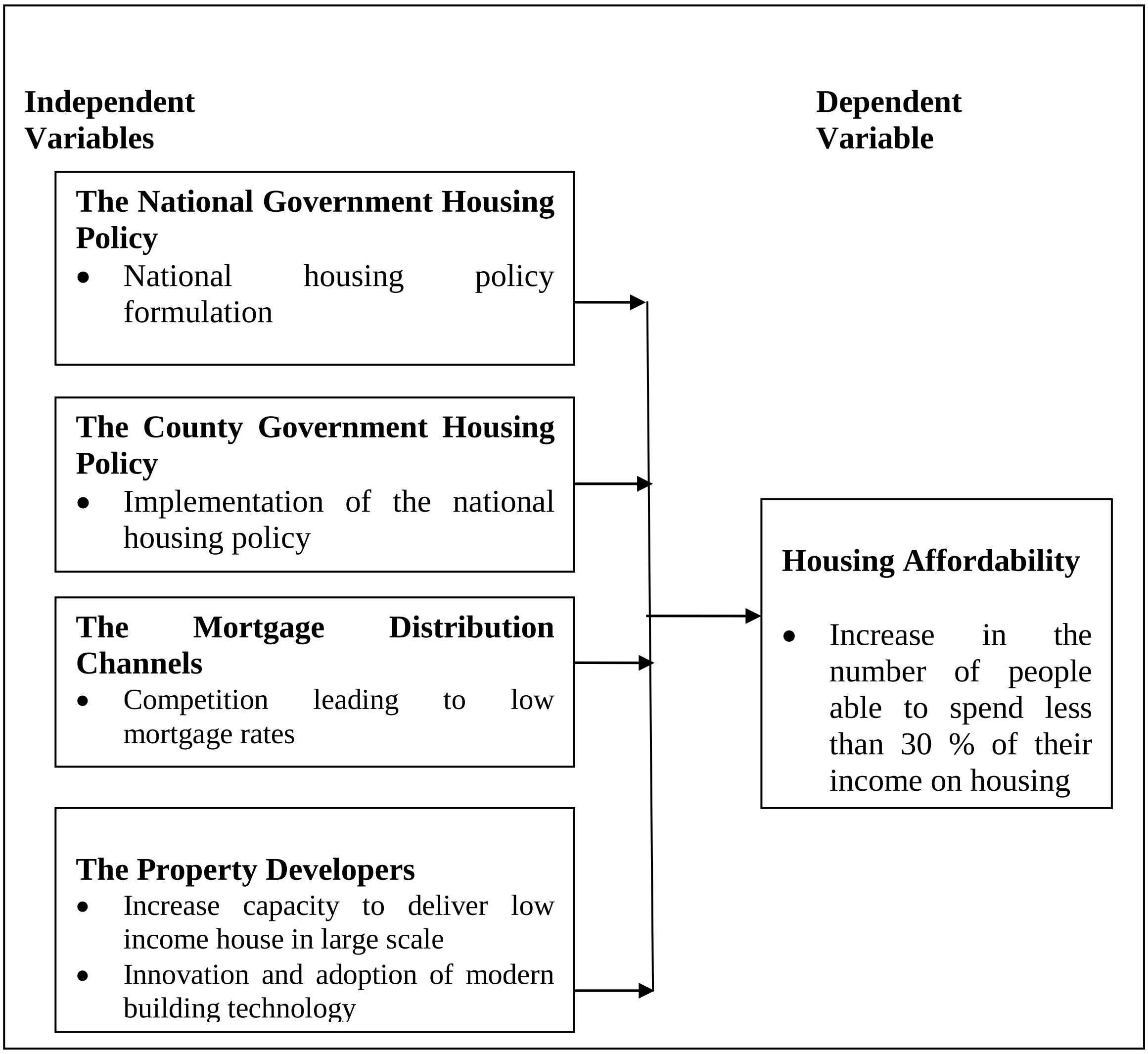

Figure 2.1: Conceptual Framework

2.4 Empirical Literature Review

This section presents the review of empirical literature on the effects of supply side institutional roles on housing affordability among the low income earners in Kenya

2.4.1 Effects of Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Berry (2004) in his paper titled "Expanding the Supply of Affordable Housing in Australia" posits that housing is and will always be a central concern of good government, especially with increasing disparities in incomes and housing costs. Apga and Calder (2005) in their article titled "The Dual Mortgage Market: The

Persistence of Discrimination in Mortgage Lending" indicates that government regulation can encourage commercial banks and their affiliates to lend mortgage loans to previously underserved markets. United Nations, (2005) in its article titled "Housing Finance Systems for Countries in Transition: Principles and Examples" has indicated that in order to benefit from the positive effects of a functioning house finance for the whole economy, emphasis on the legal, institutional and macroeconomic framework is the decisive factor because as soon as a functioning and reliable framework conditions are in place, financing techniques will emerge since borrowers and lenders are able to take informed decisions on risks in long-term obligations.

Chambers, Garriga and Schlagenhauf (2006) in their article "The Loan Structure and Housing Tenure Decisions in an Equilibrium Model of Mortgage Choice" notes that the previous large increase in the home ownership rate in USA occurred after World War II and the Korean War when the government guaranteed the payments of principal and interest so that the returning war veterans did not have to make a down payment. Relaxing this constraint was the major incentive which helped veterans become homeowners.

Arrieta (2005) in his article "Mortgage Loans and Access to Housing for Low-Income Households in Latin America" notes that more recently, in Latin America there has been a tendency for the State to withdraw from the direct building and financing of housing, and to begin playing a basically regulatory role as well as promoting private initiative. He asserts that this means that in low-income societies, where broad sectors of the population have little purchasing power, the state is necessary not only to act as a regulator but also to help provide these sectors with greater access to housing.

Congress of the United States (2010) in its article titled "Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market" posits that Governments' can play a critical role in housing provision as demonstrated in the USA where four decades ago, congressional charters set up Fannie Mae and Freddie Mac as government-sponsored enterprises to provide a stable source of funding for residential mortgages across the country, including loans on housing for low- and moderate-income families. Martin and Mathema (2008) in their article titled "Housing Finance for the Poor in Morocco Programs, Policies and Institutions" which focused on housing in Morocco recommends that subsidies for the poor for urban land and infrastructure are often essential in addressing the affordability issue, especially the provision of partially serviced plots which provides an affordable option to both the state and the occupants.

Okupe (2000) in his paper titled "The Role of the Private Sector in Housing Delivery in Nigeria: Effective Approach to Housing Delivery in Nigeria" posits that the bulk (over 90%) of Nigerian housing stocks are delivered by both the formal and informal private sector and that, majority of these are for the low-income group. It is therefore expected that Government and non-governmental organizations need to synergize and ensure the formulation and development of policy aimed at creating an enabling strategy, whereby the low income households would be able to build or own houses at their convenience using available building materials and technology they could afford, but without jeopardizing their health and well being.

2.4.2 Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Gurran, Milligan, Baker and Bugg (2007) in their paper titled "International Practice in Planning for Affordable Housing: Lessons for Australia" asserts that specific planning policies for affordable housing are predominantly found in two Canadian provinces - British Columbia and Ontario. They assert that the mechanisms used to increase the production of affordable housing in Canada include levies and reserve funds (e.g., in Colwood, British Columbia, where each new single and semi-detached dwelling unit must make a $500 contribution to a fund for new affordable housing) and linkage fees as in Richmond and Whistler in British Columbia and Banff in Alberta, where since 1990, as a condition for planning approval, all new commercial development has to provide housing that reflects their average employee need creation. The mandatory affordable housing contribution requirements in Vancouver, British Columbia, have been applied to over 30 sites since the late 1980s and created 2,670 affordable housing units, more than a third of which have been built (Gurran et al, 2007).

Monk, Crook, Lister, Rowley, Short and Whitehead (2005) in their paper titled "Land And Finance for Affordable Housing: the Complementary Roles of Social Housing Grant and the Provision of Affordable Housing Through the Planning System" posits that at the local level, local political leadership and advocacy are important factors in achieving effective affordable housing planning schemes, even within a context of strong central government support such as exists in the United Kingdom. The level of community support for affordable housing, or acceptance of responsibility to provide for regional housing need, explains why affordable housing schemes have been successfully implemented within some local areas and not others (Monk et al, 2005).

Urban Research Centre (2008) in its article "Housing Affordability Literature Review and Affordable Housing Program Audit" posits that although programs and policies for addressing affordable housing issues in Australia are not generally as well advanced as those in countries like USA, Canada and Ireland, the various state governments have undertaken measures to increase affordability of housing. They assert that states such as South Australia, Australian Capital Territory, Queensland, Victoria and Western Australia have put specific measures to increase housing affordability among the low income earners. Some of the measures include increasing the supply of affordable land to the market; over-the-counter sales of affordable housing blocks; streamlining land release and planning approval systems and supplementing the land release program by providing more land for the expansion of the community housing and private rental programs (Urban Research Centre, 2008).

2.4.3 Effects of Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

Okpala (1994) in his paper titled "Financing Housing in Developing Countries: A Review of the Pitfalls and Potentials in the Development of Formal Housing Finance System" argues that the availability of formal mortgage distribution channels is indispensable for effectively addressing the quantitative and qualitative housing problems in developing countries. United Nations (2005) in its article titled "Housing Finance Systems for Countries in Transition: Principles and Examples" asserts that there is no universally applicable model of a housing finance system. Every national housing finance system is a result of specific circumstances, such as the macroeconomic conditions, banking regulations, the size of the banking system, taxation, subsidy programmes and the structure of the housing market. These factors shape the path between bank-based and capital market-based mortgage loan delivery channels.

Some studies have examined the effect of competition among mortgage distribution channels on interest rates charged to the borrowers (eg Gual, 1999; De Bondt, 2005; Allen, Clark & Houde, 2011; Allen, 2011). Gual (1999) in his paper titled "Financial Structure and the Interest Rate Channel of ECB Monetary Policy", tests for the impact of banking competition on the transmission process related to euro area bank lending rates and finds that higher competition tends to put pressure on banks to adjust lending rates quicker when money market rates are decreasing. Also, higher competition tends to reduce the ability of banks to increase lending rates when money market rates are moving up. De Bondt (2005) in his paper titled "Retail Bank Interest Rate Pass-Through: New Evidence at the Euro Area Level" also argues that stronger competition from other banks and from capital markets has helped to speed up the euro area banks' interest rate adjustments to changes in market rates.

Allen et al. (2011) in their paper "Discounting; in Mortgage Markets" posits that the positive correlation between mortgage rates and branch concentration strongly suggests that mortgage rates are higher in less-competitive markets. Allen (2011) in his paper titled "Competition in the Canadian Mortgage Market" also asserts that as competition in the housing finance market became more intense in the past few years, notably with the entry of new competitors, the Canadian consumers benefited from increasing choice in terms of rate and term options and payment features for their mortgage loans.

Various researchers have dealt with the effect of technology on the mortgage distribution channels on mortgage lending rates (eg Bennet, Peach & Peristiani, 1998; Portner, 1999). Lenders face competitive pressures with the evolution of the internet, and can ignore these pressures only at their peril. Bennet, Peach and Peristiani (1998) in their paper titled "Structural Change in the Mortgage Market and the Propensity to refinance" allude to the increasing efficiencies of the mortgage lending market, in large part attributable to such technological factors as the increasing presence of the internet. Portner (1999) in his article titled "The Forced Evolution of Mortgage Production" holds that the customer is able to search the rates in the huge directory of lenders on the web, and then go back and demand the same deal from his or her local lender. The lender is often left with no choice but to match the offer or lose the business.

Other researchers have dealt with the advantages of various mortgage distribution channels (eg Iacobucci & Winter, 2005; Gorton & Souleles , 2005).Iacobucci and Winter (2005) in their journal article "Asset Securitization and Asymmetric Information" indicate that securitization's purpose is to lower funding costs for the firm by separating the originator's receivables via securitization from its associated risks. This view is also supported by Gorton and Souleles (2005) in their paper titled "Special Purpose Vehicle and Securitization"

2.4.4 Effects of the Role of the Property Developers on Housing Affordability among the Low Income Earners

Arvanitis (2013) in his paper titled "African Housing Dynamics: Lessons from the Kenyan Market" posits that building developers' capacity is paramount for the development of the formal housing sector. He asserts that on one hand, it will allow them to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale and on the other hand, it will allow them to build better houses, and in safer conditions. In a survey of developers, Thalmann (2006) in his article titled "Triggers for Housing Development" argues that few market developers actively monitor the market for business and profit opportunities but instead respond to market triggers, such as availability of land. CAHF (2013) in its article titled "Scoping Study: Overview of The Housing Finance Sector in Zambia" states that including the requirement that all future private housing projects include a percentage of housing for lower income groups would increase the supply of low cost housing.

The Government of Namibia (2013) in their article titled "Summary of Blueprint on Mass Housing Development Initiative in Namibia," argues that the various cumbersome procedures applicable in the process of acquiring a property do have a bearing on escalating property prices. There is also a perception that stakeholders, such as property valuers, developers and real estate agents, unnecessarily inflate house prices to rake in maximum profits based on the knowledge that there exists excess demand in the market and they are guaranteed to secure a purchaser for every property with an on-sale tag (The Government of Namibia, 2013).

Ball (1996) in his paper "Investing in New Housing: Lessons for the future" suggests that the trigger of development activity is an analysis of market opportunities by developers who see demand for new housing, anticipate adequate return on investment, gear their resources towards purchase of land and housing production and then sell these housing units with a view to maximising profits. Profitability in housing is advocated by Golland (1996) in his journal article "Housing Supply, Profit and Housing Production: The Case of the United Kingdom, Netherlands and Germany" to be based on three variables: house prices, land prices and building costs.

Arvanitis (2013) in his article titled "African Housing Dynamics: Lessons from the Kenyan Market" argues that equity provision for developers will limit excessive debt leveraging of real estate developments. Private equity funds can be an important avenue to be pursued. He argues that this would make it possible for property developers to reduce the costs of finance.

Caldera and Johansson (2011) in their paper titled "The Price Responsiveness of Housing Supply in OECD Countries" argue that new housing supply depends on national, geographical and urban characteristics and also on policies, such as land use and planning regulations. They argue that affordability of housing is affected by the way in which housing supply markets respond to changes in prices either through increased construction or raising prices. In supply-constrained markets, most adjustment occurs in higher prices rather than expanding housing supply (Gyourko, 2009). In the short to medium term supply-constrained/high-demand markets result in higher prices. Greater supply and low demand result in lower prices. Unresponsive housing markets cause price volatility including demand shocks that affect residential investment resulting in economic instability.

2.5 Critique of Existing Literature

From reviewed relevant literature, it has come out strongly from several writers like; Berry (2004), Apga and Calder (2005), United Nations, (2005), Chambers, Garriga and Schlagenhauf (2006), Arrieta (2005), Martin and Mathema (2008), Gurran,Milligan,Baker and Bugg (2007), (Gurran et al, 2007), Monk, Crook, Lister, Rowley, Short and Whitehead (2005) and Urban Research Centre (2008) that the National and County Governments policies has an effect on housing affordability. Others such as; United Nations (2005),De Bondt (2005),Gual (1999),Allen et al. (2011) have shown that mortgage distribution channels can have a positive effect on housing affordability.

However other scholars like; Kranendonk (2008),Trimbath and Montoya (2002) found contradictory results on effects of the National Government influence of lowering interest rates on affordability of housing. Inconsistent results were also found on the effect of depending on long term sources of funds on housing affordability by IUHF (2000) who argues that the UK housing finance system is funded almost exclusively through deposits to banks yet the mortgage interest rate in UK is far much lower than the mortgage interest rate in Kenya and home ownership is higher than Kenya at a rate of 68 percent.

These mixed results and alternative views from different countries and writers are mainly as a result of lack of comprehensive analysis of supply side institutional roles on housing affordability among the low income earners. This study intends to take a departure from past studies and incorporate several supply side institutions and examine their effect on housing affordability among the low income earners. There is also concentration of housing affordability studies mostly in developed and emerging economies leaving a gap for Africa and Kenya specifically. This literature gap is addressed by this comprehensive study.

2.6 Research Gap

Onyango, (2010) carried out a study on "Profitability of Financing Low-Cost Housing in Kenya" and established that low cost housing in Kenya is profitable. Huchzermeyer (2006) on a study on "Slum Upgrading Initiatives in Kenya within the Basic Services and Wider Housing Market" reflects on the challenges that slum upgrading present for a balanced realization of the seven internationally recognized elements of the right to housing. Economic and Social Rights Centre (2012) carried out a study on "The Assessment of the Realization of the Right to Housing in Kenya" and notes that the broader housing policy framework on housing rights lacks concrete programmatic measures to address the issue of accessibility to adequate housing for disadvantaged groups, such as the elderly and persons with disabilities.

Njathi, (2011) on a study on "The Challenges of Housing Development for the Low Income Market" asserts that low purchasing power is one of the challenges of housing development for the low income market in Kenya. Kigige (2011) on a study on "Factors Influencing Real Estate Property Prices in Meru Municipality" posits that inducement to real estate investors by financial institutions in the form of good terms in loaning would help to open up the municipality in terms of housing estates to cater for the growing population. Various studies on housing in Kenya have been undertaken by various researchers as demonstrated above. However none has concentrated entirely on the supply side institutional roles on housing affordability among the low income earners in Kenya.

2.7 Summary

This chapter examined both theoretical and empirical literature relevant to the effects of supply side institutional roles on housing affordability among the low income earners in Kenya. The review indicated that the National Government housing policy, County Governments housing policy, the mortgage distribution channels and the property developers, all of which were specific objectives of the study, have a role to play as possible influencers of housing affordability among the low income earners in Kenya. A conceptual framework was developed and presented in this chapter. The next chapter (3) discusses the research methodology used in this study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

In this chapter, the researcher examines the research design, target population, sampling frame, sampling technique, sample size, data collection instrument, pilot test of the questionnaire, data collection, data processing and data analysis

3.2 Research Design

Nachmias and Nachmias, (2002) defines a research design as the blue print or road map that guides the investigator as he or she collects, analyzes, and interprets observations. It is a logical proof that allows the researcher to draw inferences concerning causal relations among variables under investigation. It also defines the domain of generalizability, that is, whether the obtained interpretations can be generalized to a larger population or to different situations. It is the blue print that enables the investigator to come up with solutions to research problems and guides him or her in the various stages of research (Nachmias & Nachmias 2002).

In this study, analytical research design was adopted. Analytical research was chosen because it is normally used when there is already a hypothesis as to why something is happening. Questions and tests are designed to support that hypotheses, and prove if it is correct or not. The purpose of analytical research is to explain or answer the question of why something occurs. It identifies the cause and effect of a specific event or series of events. It is a cause and effect type of research (Nachmias & Nachmias, 2002). It attempts to uncover the relationships between the reasons for something and its chain effects. It typically seeks to identify a type of behavior occurring in a current market environment. It could be done through using questionnaires, group discussions, interviews; random sampling among other tools (Nachmias & Nachmias, 2002).

This research was based on positivism research philosophy. Tharakan (2006) in his published work on methodology of social sciences: positivism, anti-positivism and the phenomenological mediation asserts that there are two distinct philosophical approaches regarding the methodology of social sciences: the ‘positivistic’ and, its opposite, the ‘anti-positivistic’ while a third one, the critical theory paradigm emerged in the 1960s. This research was based on positivism research philosophy because positivism stands for objectivity, measurability, predictability, controllability and constructs laws and rules of human behavior while non-positivism essentially emphasizes understanding and interpretation of phenomena and making meaning out of this process (Cohen, Lawrence & Morrison, 2000).

3.3 Population

Population is a complete set of individual cases or objects with some common observable characteristics. A particular population has some characteristics that differentiates it from other population (Mugenda & Mugenda, 2003).There are two types of population namely the target population and the accessible population. The target population refers to the entire group of individuals or objects to which researcher is interested in generalizing the conclusions while the accessible population is the population who realistically could be included in the sample (Borg & Gall, 2007).

Ambrose and Barlow (1987) and Arvanitis (2013) have identified some factors as important in influencing the level of new house building and housing affordability. These are direct capital investment by the Government for public housing, Government support for production and consumption of houses and changes in the profitability of property developers in the private sector. Therefore the target population in the study were the entities that influence the supply of low cost housing which are the Ministry of Land, Housing and Urban Development, the National Treasury, Central Bank and CMA representing the National Government, the Ministry of Land, Housing and Urban Development of the Nairobi County Governments representing the County Governments and Commercial Banks, Microfinance Organizations, Housing Cooperatives, and NHC representing the mortgage distribution channels and the property developers. The population comprises 300 entities that influence the supply of low cost housing in Kenya.

3.4 Sampling Frame

A sampling frame is a list used to define a researcher's population of interest **(**Beck, Bryman & Liao, 2004).It defines a set of elements from which a researcher can select a sample of the target population **(**Beck, et al. 2004). The sampling frame is derived from the entities that have been identified as important in influencing the level of new house building and housing affordability (Ambrose & Barlow, 1987; Arvanitis, 2013). These are direct capital investment by the Government for public housing, Government support for production and consumption of houses and changes in the profitability of property developers in the private sector.

The sampling frame in this study comprised Ministry of Land, Housing and Urban Development, the National Treasury, the Central Bank and CMA representing the National Government, the Ministry of Land, Housing and Urban Development of the Nairobi County Governments representing the County Governments, a list of the 43 Commercial Banks in Kenya obtained from the Central Bank Supervision Report of 2012, a list of the 44 microfinance organizations obtained from the Association of Microfinance Institutions in Kenya, a list of the 99 Housing Co operatives with headquarters at Nairobi obtained from NACHU representing the mortgage distribution channels and a list of 107 property developers with headquarters at Nairobi obtained from Kenya Property Developers Association.

Table 3.1: Sampling Frame

Organization	Total
Ministry of Land, Housing and Urban Development (National Government)	1
Ministry of Land, Housing and Urban Development (County Governments)	1
National Treasury	1
Central Bank	1
Commercial Banks	43
Microfinance Institutions	44
Housing Co operatives	99
Capital Markets Authority	1
HFCK	1
National Housing Corporation	1
Property Developers	107
Total	300

3.5 Sampling Technique and Sample Size

3.5.1 Sampling Technique

Stratified random sampling was used. Strata's were formed based on the characteristics of the population, then simple random sampling was used to select respondents in each strata. Stratified random sampling is a useful method when the population is heterogeneous and it is possible to establish strata which are reasonably homogeneous (Kothari, 2004).

3.5.2 Sample Size

To select the appropriate sample size, the study used the Godden (2004) formula. The Godden (2004) formula has two steps. In step one, the sample size is calculated using the infinite population formula and in step two, the sample size derived from that calculation is used to calculate a sample size for the finite population.

Step 1

Sample Size - Infinite Population (where the population is greater than 50,000)

$$SS = \frac{Z^2 \times (p) \times (1 - p)}{C^2} \qquad 3.1$$

$$= \frac{1.96^{2} \times (0.5) \times (1-0.5)}{0.05^{2}}$$

$$= \quad 384.16$$

Where

SS = Sample Size

Z = Z-value (e.g., 1.96 for a 95 percent confidence level)

P = Percentage of population picking a choice, expressed as decimal

C = Confidence interval, expressed as decimal (e.g., .05 = +/- 5 percentage points)

Step 2

Sample Size – Finite Population (where the population is less than 50,000)

$$\text{New SS} = \frac{\text{Sample Size}}{\left(1 + \frac{(\text{Sample Size} - 1)}{\text{Pop}}\right)} \qquad 3.2$$

$$\text{New SS} = \frac{384.16}{\left(1 + \frac{(384.16 - 1)}{300}\right)} \qquad 3.2$$

$$= \quad 168$$

Pop = Population

Based on the above formulae, the researcher selected a sample of 168 respondents from the target population of the 300 as shown below.

Table 3.2: Sample Selection Table

Organization	**Total**	**Sample**
Ministry of Land, Housing and Urban Development (National Government)	1	1
Ministry of Land, Housing and Urban Development (County Governments)	1	1
National Treasury	1	1
Central bank	1	1
Commercial Banks	43	24
Microfinance Institutions	44	24
Housing co operatives	99	54
Capital Markets Authority	1	1
HFCK	1	1
National Housing Corporation	1	1
Property Developers	107	59
Total	300	168

3.6 Data Collection Instrument

Closed ended questionnaires were used in this study. According to Kombo and Tromp (2006) questionnaires are the most appropriate instruments for collecting information about issues that respondents may feel reluctant to discuss because they uphold confidentiality. The questionnaire was used because it has several advantages in that it saves time and it is economical in terms of resource utilization including administration (Mugenda & Mugenda, 2003). Closed ended questionnaires were used because of the selected methods of data analysis.

3.7 Pilot Test of the Questionnaire

The researcher pretested the questionnaires before launching the main study. Dawson (2002) states that pilot testing assists researchers to see if the questionnaire will obtain the required results. According to Polit and Beck (2003), a pilot study or test is a small scale version, or trial run, done in preparation for the major study. The researcher pretested the questionnaire among ten percent of the unselected population which were picked proportionately among Commercial Banks, Microfinance Organizations, Housing Co operatives. The rule of the thumb suggests that 5% to 10% of the target sample should constitute the pilot test (Cooper and Schilder, 2011; Creswell, 2003; Gall and Borg, 2007). Pretesting helped to determine the strengths and weaknesses of the survey concerning question format, wording and order. The researcher also pretested the reliability and validity of the survey questions.

3.7.1 Reliability

Reliability is a measure of the extent to which a research instrument yields consistent results after repeated trials. The data for the questionnaires used from the pilot study was input into the SPSS software and the tests of reliability test produced. SPSS was used to obtain Cronbach's alpha to test the reliability of the data. Cronbach's alpha is a reliability coefficient that indicates how the items in a set are positively correlated. The closer the reliability coefficient is to 1, the higher the internal consistency reliability. The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.7. In general terms a Cronbach alpha of 0.8 is good, 0.7 is an acceptable range while if it is 0.6 and below, is poor (Sekaran, 2003).

Table 3.2: Reliability Tests

Variable	N of Items	Cronbach's Alpha
House Affordability	10	0.748
County Governments	10	0.776
National Government	20	0.853
Mortgage Distribution Channels	12	0.748
Property Developers	10	0.707

3.7.2 Validity

The survey of the question's validity is determined by how well it measures the concept(s) it is intended to measure. According to Nachmias and Nachmias (2002), validity is concerned with the question "am i measuring what i intend to measure?" The validity of the instrument was enhanced after the pilot study. Polit and Beck (2003) states that the purpose of a pilot test is not so much to test research hypotheses, but rather to test protocols, data collection instruments, sample recruitment strategies and other aspects of a study in preparation for a larger study. The questionnaire was validated by discussing it with seventeen randomly selected managers of Commercial Banks, Microfinance Institutions, Housing Co operatives and Property Developers representing ten percent of the population (Cooper and Schilder, 2011; Creswell, 2003; Gall and Borg, 2007).Their views were evaluated and incorporated to enhance content and construct validity of the questionnaire. The researcher then discussed the results of the pilot study with the supervisors and made the relevant adjustments to the questions to make them measure the intended concepts.

3.8 Data collection Procedure

The method that was used is the drop and pick method. At the Ministry of Land, Housing and Urban Development, National Treasury, Central Bank of Kenya and Capital Markets Authority representing the National Government, the questionnaires were issued to the officers in charge of mortgage regulation and or financing. At the

Ministry of Land, Housing and Urban Development at the Nairobi County Governments the questionnaires were issued to the officer in charge of implementation of the housing policy. At the Commercial Banks, Microfinance Institutions, Housing co operatives, NHC and HFCK the questionnaires were issued to the officers at the headquarters in charge of mortgage department or mortgage finance.

3.9 Data Processing and Analysis

3.9.1 Data Processing

Data processing is "the collection and manipulation of items of data to produce meaningful information." The data was processed using various processes which included; validation - ensuring that supplied data is "clean, correct and useful", sorting - "arranging items in some sequence and or in different sets", summarization - reducing detail data to its main points and aggregation - combining multiple pieces of data (Freedman, 2005).

3.9.2 Data Analysis

The data collected was analyzed using inferential statistics and descriptive statistics using the IBM SPSS Statistics 20.0.1(March, 2012). The software was chosen because it is the most used package for analyzing survey data. Likert scale data was analyzed at the interval measurement scale. Descriptive statistics recommended for interval scale items include the mode, mean for central tendency and standard deviations for variability. The mode reveals the most frequent response. The mean can reveal the direction of the average answer. The standard deviation is also important as it gives an indication of the average distance from the mean. A low standard deviation would mean that most observations cluster around the mean. A high standard deviation would mean that there was a lot of variation in the answers (Geisser & Johnson, 2006).The mean was used for this study. Regression analysis was also used. Stanely, Blair and Alberman (2000) posits that regression methods have become an integral component of any data analysis concerned with describing the relationship between the dependent variable and one or more explanatory variables. The regression model was the one below

$$Y=\beta_0 + \beta_1X_1+ \beta_2X_2+ \beta_3X_3 + \beta_4X_4 + \mu \qquad 3.3$$

Where Y, the dependent variable, is low income housing affordability and X_1-X_4 are the independent variables, β is the regression coefficient, β_0 is the intercept- the value of Y when X values are zero, X_1, is the effects of the role of the National Government X_2, is the effects of the role of the County Governments X_3, is the effects of the role of mortgage distribution channels, X_4 is the effects of the role of property developers while μ is the error term normally distributed about the mean of zero.

The F-test was used to test the significance of the overall model at a 5% significance level. The conclusions were based on the p-value. If the p - value is less than 0.05, then it was concluded that the model was significant. If the p-value was greater than 0.05, then it was concluded that the model was not significant.

The T-test was used to test the significance of each independent variable. The decision on whether to fail to accept or fail to reject the null hypothesis was based on the p-value for each. If the p-value was less than 0.05, the null hypothesis failed to be accepted and the alternate hypothesis failed to be rejected. Alternatively if the p-value was greater than 0.05, the null hypothesis failed to be rejected and the alternate hypothesis failed to be accepted.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents the research findings of the study and the corresponding discussions. These presentations are organised as follows: response rate and the findings for each of the four study objectives on the basis of descriptive and inferential statistical analysis. The results form the basis for discussion on how each of the variables influences housing affordability among the low income earners in Kenya. Computations of frequencies, averages, statistical tests like correlation, regression and ANOVA tests, were used to analyze the data guided by the research hypotheses.

4.1.1 Reliability Test

Table 4.1 shows the reliability test. The closer the reliability coefficient is to 1, the higher the internal consistency reliability. The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.7. In general terms a Cronbach alpha of 0.8 is good, 0.7 is an acceptable range while if it is 0.6 and below, is poor (Sekaran, 2003).

Table 4.1: Reliability Tests

Variable	N of Items	Cronbach's Alpha
House Affordability	10	0.748
County Governments	10	0.776
National Government	20	0.853
Mortgage Distribution Channels	12	0.748
Property Developers	10	0.707

4.1.2 Multicollinearity Test

Table 4.2 shows the multicollinearity results for all variables. Variance inflation factors (VIF) measures how much the variance of the estimated coefficients are increased over the case of no correlation among the X variables. If no two X variables are correlated, then all the VIFs will be 1. If VIF for one of the variables is around or greater than 5, there is collinearity associated with that variable. The easy solution is if there are two or more variables that will have a VIF around or greater than 5, one of these variables must be removed from the regression model.

Table 4.2: Multicollinearity Tests

					Collinearity Statistics	
Variables	**Beta**	**Std. Error**	**t**	**Sig.**	**Tolerance**	**VIF**
Constant	-0.34	0.23	-1.479	0.141		
National Government	0.249	0.093	2.69	0.008	0.339	2.954
County Governments	-.139	.086	-1.614	.108	.254	3.936
Mortgage Distribution Channels	0.152	0.076	1.997	0.048	0.286	3.497
Property Developers	0.16	0.074	2.176	0.031	0.406	2.462

4.2 Response Rate

Response rate, according to the America Association for Public Opinion Research (AAPOR), (2011) is the rate of completed questionnaires with reporting units divided by the number of eligible reporting units in the sample. A total of 168 questionnaires were distributed to respondents who worked in the entities that influence the affordability of low cost housing. A total of 120 questionnaires were returned. The response rate achieved, therefore, was 71.4%. Fourty eight (48) questionnaires were not returned. According to Mugenda and Mugenda (2003), a response rate of 50% is acceptable for analysis publishing.

AAOPR (2011) explained that a response rate of over half is good while over 70% is very good. The response rate was very good at 71.4% and, therefore, it was sufficient for analysis. Another scholar, Babbie (1990) suggested that a response rate of 60% is good, 70% very good and 50% adequate for analysis and reporting from manual surveys. Bailey (1996) set the adequacy bar at 75% and Chen (1996) argued that the larger the response rate, the smaller the non-response error.

Table 4.3: Response Rate

Response Rate	Frequency	Percent
Returned	120	71.4%
Unreturned	48	28.6%
Total	168	100

4.3 Demographics Information

This section presents the demographics of the study. The key characteristics of the respondents were: respondent's organization, position of the respondents and department the respondents worked in.

4.3.1 Organization of the Respondents

The respondents were asked to indicate the organization they worked for. Table 4.4 shows that 25 % of the respondents were from housing co-operatives, 35.8% from property developers, 18.3 % from commercial banks of Kenya, 15% from microfinance organizations, while 5.6% were from Ministry of Land, Housing and Urban Development, the National Treasury, the Central Bank, the Nairobi County Government's Ministry of Land, Housing and Urban Development representing the County Governments, HFCK and NHC. The findings imply that the respondents were well spread in the organizations that deal with housing supply issues in Kenya.

Table 4.4: Classification of Respondents per Organization

Organization	Frequency	Percent
Ministry of Land, Housing and Urban Development (National Government)	1	0.8
Ministry of Land, Housing and Urban Development (County Governments)	1	0.8
National Treasury	1	0.8
Central Bank	1	0.8
Commercial Banks	22	18.3
Microfinance Institutions	18	15.0
Housing Co operatives	30	25.0
Capital Markets Authority	1	0.8
HFCK	1	0.8
National Housing Corporation	1	0.8
Property Developers	43	35.8
Total	120	100

4.3.2 Position of the Respondents

The study sought to find out the position of the respondents in the firm. Figure 4.1 illustrates that 47% of the respondents were in supervisory level while 43% were in the middle management and 10% were in top management.

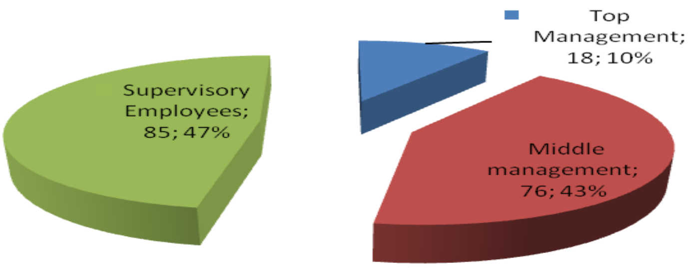

Figure 4.1: Position of the Respondent

4.3.3 Department of the Respondents

The respondents were asked to indicate the departments they worked in their organizations. Table 4.5 indicates that 51.7% of the respondents were in mortgage department, while 32.5% were in risk compliance department and 15.8% were in accounts and finance department. The findings imply that the respondents were well spread in all departments and hence no biasness in the responses obtained from the respondents.

Table 4.5: Department of the Respondents

Department	Frequency	Percent
Accounts and Finance	19	15.8
Mortgage Department	62	51.7
Risk and Compliance	39	32.5
Total	120	100

4.4 Research Findings

This section presents results emerging from analysis of the specific objectives of the study. The independent variables that were investigated were; effects of the role of National Government, effects of the role of County Governments, effects of the role of mortgage distribution channels and the effects of the role of property developers on housing affordability among the low income earners in Kenya. For each of these variables, reliability tests, factor analysis, descriptive statistics, regression and correlation analysis were performed.

4.4.1 Housing Affordability among low Income Earners

i) Reliability Test

Using Cronbach's Coefficient Alpha test on housing affordability among low income earners, a coefficient of 0.748 was found as shown in Table 4.6 These results corroborates findings by Sekaran (2003), Saunders Lewis and Thornhill (2009) and Christensen, Johnson and Turner (2011) who stated that scales of 0.7 and above, indicate satisfactory reliability. Based on these recommendations, the statements under the National Government variable of this study were concluded to have adequate internal consistency, therefore, reliable for the analysis and generalization on the population.

Table 4.6: Reliability Test on Housing Affordability among the Low Income Earners

Description	Indicator
Cronbach's Alpha	0.748
No of Items	10

ii) Factor Analysis

Factor Analysis was carried out to describe variability among the observed variables and check for any correlated variables with the aim of reducing data that was found redundant. Conventionally, statements scoring more than 30% which is the minimum requirement for inclusion of variables into the final model (Hair, Black, Babin & Anderson, 2010; Kothari, 2004) were included. Table 4.7 indicates that all the ten statements had a coefficient of more than 0.3 (30%) hence were retained for further analysis.

Table 4.7: Factor Analysis on Housing Affordability among the Low Income Earners

Statements	Factor Component
a)Lowering price of houses would increase affordability of housing to the low income earners	0.669
b)Construction of low cost houses would increase affordability of housing to the low income earners	0.408
c)Increasing the supply of low cost houses would increase affordability of housing to the low income earners	0.647
d)Increasing the number of people who spend less than 30 % of their income on housing would increase affordability of housing to the low income earners	0.680
e)Increasing the number of those capable of qualifying for mortgage loans would increase affordability of housing to the low income earners	0.511
f)Innovation and adoption of modern building technology would increase affordability of housing to the low income earners	0.712
g)Lowering of interest spreads would increase affordability of housing to the low income earners	0.632
h)Lowering mortgage interest rates would increase affordability of housing to the low income earners	0.412
i)Delivering low income house in large scale would increase affordability of housing to the low income earners	0.317
j)Depending on long term sources of capital by mortgage lenders would increase affordability of housing to the low income earners	0.533

iii) Descriptive on Housing Affordability among the Low Income Earners

a). Effect of Lowering Price of Houses on Affordability of Housing to the Low Income Earners

Regarding the statement that lowering price of houses would increase affordability of housing to the low income earners 32.5% of the respondents strongly agreed, 28.3% agreed while 18.3% strongly disagreed and another 17.5% disagreed as shown on Table 4.8 below.

Table 4.8: Effect of Lowering Price of Houses on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	22	18.3	18.3
Disagree	21	17.5	35.8
Neutral	4	3.3	39.1
Agree	34	28.3	67.4
Strongly Agree	39	32.5	100
Total	120	100	

The study findings concur with those of Maclennan and Williams (1990) who in their article “Affordable Housing in Britain and America” noted that “housing affordability” is concerned with securing some given standard of housing (or different standards) at a price or rent which does not impose, in the eyes of some third party (usually government), an unreasonable burden on household incomes. They conclude that at lower house prices, more people would be included in the affordable housing bracket.

b). Effect of Construction of Low Cost Houses on Affordability of Housing to the Low Income Earners

Table 4.9 illustrates that 42.5% of the respondents agreed and another 37.5% strongly agreed that construction of low cost houses would increase affordability of housing to the low income earners. A further 10.8% of the respondents disagreed while 5.8% strongly disagreed and 3.3% were neutral as shown in Table 4.9 below

Table 4.9: Effect of Construction of Low Cost Houses on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	7	5.8	5.8
Disagree	13	10.8	16.6
Neutral	4	3.3	19.9
Agree	51	42.5	62.5
Strongly Agree	45	37.5	100
Total	120	100	

The study findings agree with those of UN-HABITAT (2011) which in its article titled “Affordable Land and Housing in Africa” asserts that one major reason why housing is unaffordable for the urban poor majority in Africa is the high cost building materials. They argue that the problem with building materials arises because many governments, at central and local levels, insist on the use of conventional building materials and technologies. These are stipulated in building codes and regulations, many of which are a colonial heritage or adopted from foreign countries. These standards and regulations prevent the use of readily available local building materials, and also the use of cost-effective and environmentally-friendly construction technologies. This causes the houses constructed to be out of reach of the low income earners.

The study findings also concur with those of Himmelberg, Mayer, and Sinai (2005) who in their article titled “Assessing High House Prices: Bubbles, Fundamentals and

Misperceptions" noted that under perfect competition, the volume of housing construction is determined by the real prices of inputs. They argue that in equilibrium, the economic cost of producing an extra unit of housing should equal the price at which it is sold. Therefore, if there are no market imperfections the price of residential housing is fully determined by real construction costs and the real price of land (Himmelberg, Mayer & Sinai, 2005).

c). Effect of Increasing Supply of Low Cost Houses on Affordability of Housing to Low Income Earners

Figure 4.2 illustrates that 39.7% of the respondents agreed and another 28.5% strongly agreed that increasing the supply of low cost houses would increase affordability of housing to the low income earners. A further 14.5% of the respondents disagreed while 8.4% strongly disagreed and 8.9% were neutral as shown in Figure 4.2 below

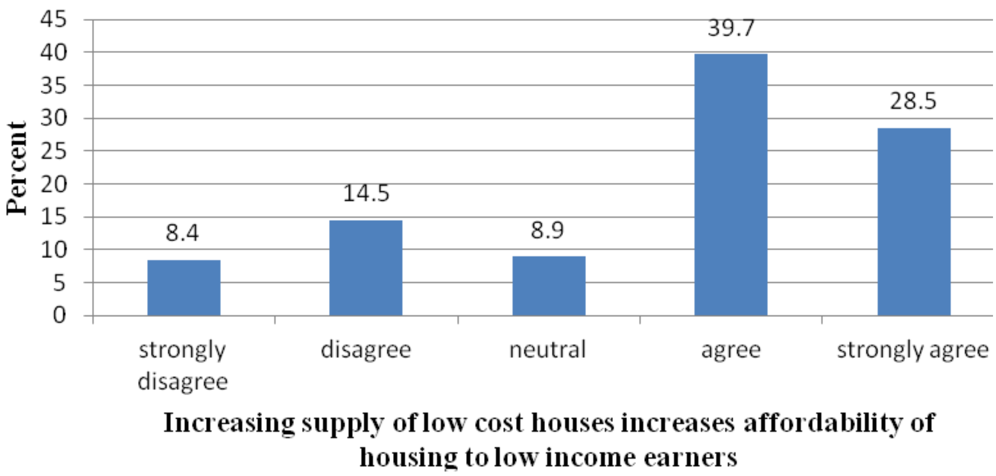

Figure 4.2: Effect of Increasing Supply of Low Cost Houses on Affordability of Housing to Low Income Earners

d). Effect of Increasing the Number of People Who Spend Less Than 30 % of Their Income on Housing on Affordability of Housing to the Low Income Earners

Regarding the statement that increasing the number of people who spend less than 30 % of their income on housing would increase affordability of housing to the low income earners, 27.5% of the respondents strongly agreed, 39.1% agreed while 22.5% disagreed and 4.2% strongly disagreed as shown on Table 4.10 below.

Table 4.10: Effect of Increasing the Number of People Who Spend Less Than 30 % of Their Income on Housing on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	4.2	4.2
Disagree	27	22.5	26.7
Neutral	8	6.7	33.4
Agree	47	39.1	72.5
Strongly Agree	33	27.5	100
Total	120	100	

The study findings agree with those in Battellino (2008) who in his article titled “Background Notes for Opening Remarks to Senate Select Committee on Housing Affordability in Australia” indicated that the Australian government’s 1991/92 National Housing Strategy, recommended that 30 per cent of income be adopted as a measure for the maximum level of housing commitments for households in the bottom 40 per cent of the income distribution.

The study findings also concur with those in Wilson and Schwartz (2008) who in their article titled “Who Can Afford to Live in a Home?: A Look At Data from the 2006 American Community Survey” which indicated that the conventional public policy indicator of housing affordability in the United States is the percent of income spent on housing. Housing expenditures that exceed 30 percent of household income have historically been viewed as an indicator of a housing affordability problem. The conventional 30 percent of household income that a household can devote to housing costs before the household is said to be “burdened” evolved from the United States National Housing Act of 1937 (Wilson & Schwartz, 2008).

e). Effect of Increasing the Number of Those Capable of Qualifying for Mortgage Loans on Housing Affordability of Low Income earners

Figure 4.3 illustrates that 45.8% of the respondents agreed and another 29.6% strongly agreed that increasing the number of those capable of qualifying for mortgage loans would increase affordability of housing to the low income earners. A further 12.3% of the respondents disagreed while 9.5% strongly disagreed and 2.8% were neutral as shown in Figure 4.3 below

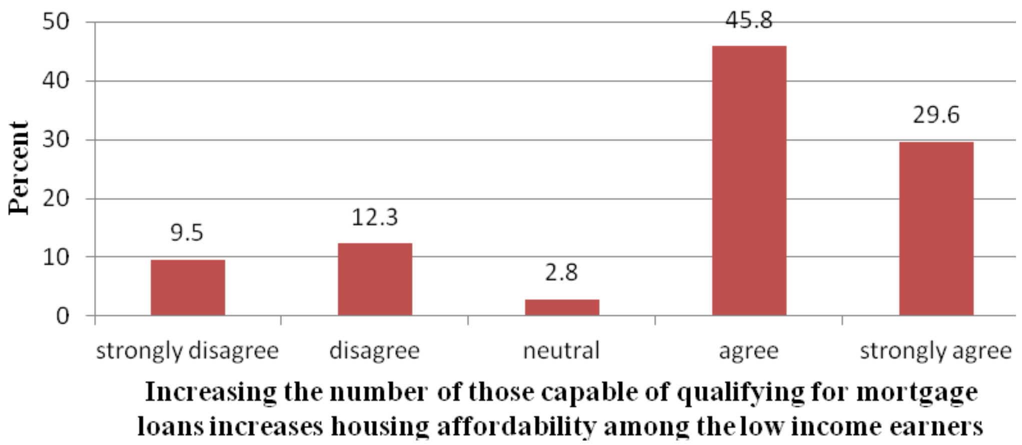

Figure 4.3: Effect of Increasing the Number of Those Capable of Qualifying for Mortgage Loans on Housing Affordability of Low Income earners

The study findings also concur with those of Kariuki (2013) who in her article titled “Expensive Mortgages Act as Clamp on Home Ownership Growth,” argues that urgent attention needs to be given to increasing the accessibility and eligibility for mortgages if we are to make any headway in increasing home ownership to a wider band of Kenyans.

f). Effect of Innovation and Adoption of Modern Building Technology on Affordability of Housing to the Low Income Earners

Regarding the statement that innovation and adoption of modern building technology would increase affordability of housing to the low income earners, 29.1% of the respondents strongly agreed, 39.1% agreed while 19.2% disagreed and 9.2% strongly disagreed as shown on Table 4.11 below.

Table 4.11: Effect of Innovation and Adoption of Modern Building Technology on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	11	9.2	9.2
Disagree	23	19.2	28.4
Neutral	4	3.3	31.7
Agree	47	39.1	70.8
Strongly Agree	35	29.1	100
Total	120	100	

The study findings agree with those of Government of Namibia (2013), who in her article titled "Summary of Blueprint on Mass Housing Development Initiative in Namibia," argues that utilization of alternative building methods, materials and technologies that are cost effective would increase affordability of housing in Namibia.

The study findings also agree with those of Arvanitis (2013) who in his article titled "African Housing Dynamics: Lessons from the Kenyan Market" argues that on the use of alternative building solutions, the market needs to be educated to accept different building solutions which are more suitable cost-wise to reaching medium/lower income segments. For instance greater investments into pre-fabricated houses can be more cost effective, drastically reduce construction time and increase affordability of housing to the medium/lower income segments.

g). Effect of Lowering of Interest rate spreads on Affordability of Housing to the Low Income Earners

Figure 4.4 illustrates that 38% of the respondents agreed and another 32.4% strongly agreed that lowering of interest spreads would increase affordability of housing to the low income earners. A further 15% of the respondents disagreed while 11.7% strongly disagreed and 2.8% were neutral as shown in Figure 4.4 below

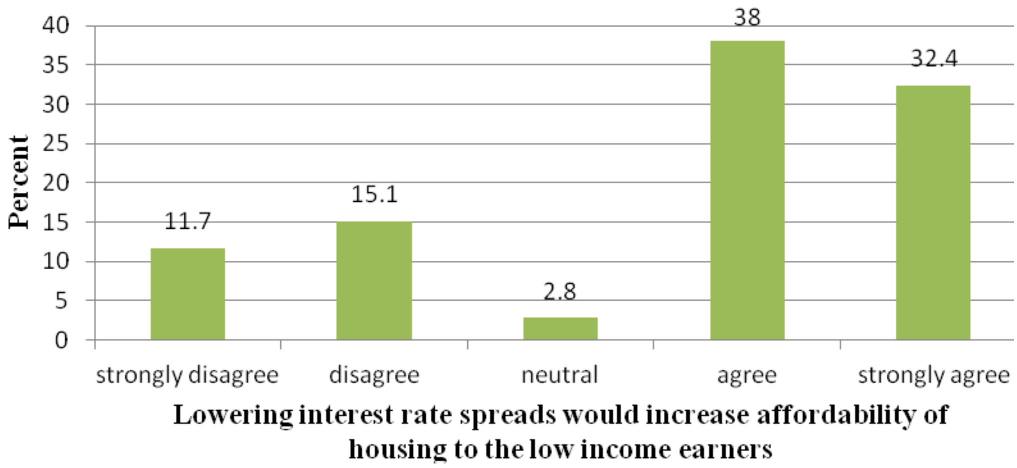

Figure 4.4: Effect of Lowering of Interest rate spreads on Affordability of Housing to the Low Income Earners

The study findings also concur with those of Kariuki (2013) who in her article titled "Expensive Mortgages Act as Clamp on Home Ownership Growth," argues that the surge in mortgage interest rates that followed on the CBK rate rises of 2011 led to a widening in interest rates by the commercial banks. She posits many banks continued to demand a 9 point spread for mortgage rates which is a margin that is almost unheard of in any other mortgage market and this high cost of mortgages was limiting housing affordability among the low income earners.

h). Effect of Lowering Mortgage Interest Rates on Affordability of Housing to the Low Income Earners

Table 4.12 illustrates that 45% of the respondents agreed and another 19.1% strongly agreed that lowering mortgage interest rates would increase affordability of housing to the low income earners. A further 20% of the respondents disagreed while 8.3% strongly disagreed and 7.5% were neutral as shown in Table 4.12 below.

Table 4.12: Effect of Lowering Mortgage Interest Rates on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	10	8.3	8.3
Disagree	24	20	28.3
Neutral	9	7.5	35.8
Agree	54	45	80.8
Strongly Agree	23	19.1	100
Total	120	100	

The study findings concur with those of Thordsen and Nathan (1999), who in their article titled "Micro Lending: A Budding Industry" noted that the level of interest rates has a direct effect on a consumer's ability to repay a loan. They assert that when interest rates are low, people are willing to borrow because they find it relatively easy to repay their debt. When interest rates are high, people are reluctant to borrow because repayments on loans cost more. Some consumers may even find it difficult to meet their existing loan repayments, especially if interest rates increase faster than the rise in a consumer's income. If interest rates rise sharply and stay high for a long period, some consumers will default on their loans (Thordsen & Nathan ,1999).

Contradictory results were found by Kranendonk (2008) who in his article titled "Are Dutch House Prices Overvalued" argues that as long-term interest rates become higher, the financial burden for households increases and house prices decline. Kranendonk (2008) in his research into the factors that may be of influence on house prices in the Netherlands found an elasticity of around -5% for every 100 basis points in higher, long-term interest. The study made a decomposition of the contributions by the various factors related to house price development. This decomposition shows that interest rate developments since the turn of the century have only had a limited impact on house prices.

These findings are also inconsistent with those ones of Trimbath and Montoya (2002) who in their article titled “Housing Affordability in Three Dimensions: Price, Income and Interest Rates” posits that as lower interest rates attract more people into the home-buying market, the increase in demand also induces buyers to bid higher prices for the homes they choose.

i). Effect of Delivering Low Income Houses on Large Scale on Affordability of Housing to the Low Income Earners

Table 4.13 illustrates that 48.3% of the respondents agreed and another 16.7% strongly agreed that delivering low income house in large scale would increase affordability of housing to the low income earners. A further 9.1% of the respondents disagreed while 10.8% strongly disagreed and 15% were neutral as shown in Table 4.13 below.

Table 4.13: Effect of Delivering Low Income House on Large Scale on Affordability of Housing to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	10.8	10.8
Disagree	11	9.1	19.9
Neutral	18	15	34.9
Agree	58	48.3	83.2
Strongly Agree	20	16.7	100
Total	120	100	

The study findings agree with those of Arvanitis (2013) who in his article titled “African Housing Dynamics: Lessons from the Kenyan Market” posits that building developers' capacity is paramount for the development of the formal housing sector. He asserts that on one hand, it will allow them to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale and on the other hand, it will allow them to build better houses, and in safer conditions. Delivering housing units in larger quantities so as to benefit from economies of scale would enable the developers sell the houses at lower prices thus increasing affordability to the low income earners.

j). Effect of Depending on Long Term Sources of Capital by Mortgage Lenders on Affordability of Housing to the Low Income Earners

Regarding the statement that depending on long term sources of capital by mortgage lenders would increase affordability of housing to the low income earners, 48.6% of the respondents agreed, 26.3% strongly agreed while 19.6% disagreed and 2.8% strongly disagreed as shown on Figure 4.5 below.

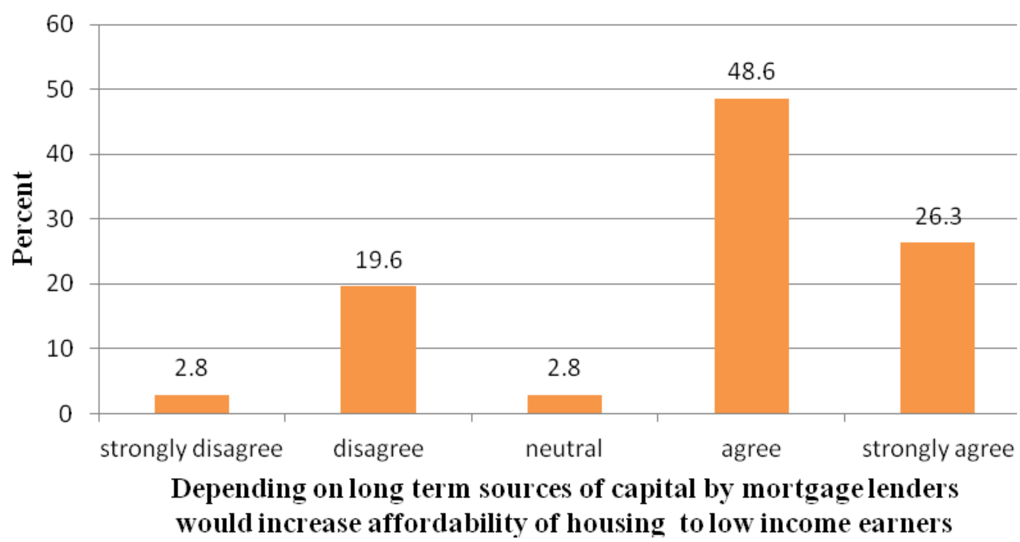

Figure 4.5: Effect of Depending on Long Term Sources of Capital by Mortgage Lenders on Affordability of Housing to the Low Income Earners

The study findings agree with those of Kalema and Kayiira (2012), who in their article titled "overview Of the Housing Industry and Housing Finance Sector in Uganda", cites lack of sufficient long-term liabilities, owing to an undeveloped pension industry and limited life insurance funds as one of the barriers to housing development and affordability. They asserts that the commercial banks, which play the dominant role in housing finance, have mostly short-term deposits and are therefore inclined to provide loans only for periods not exceeding two years. These findings are inconsistent with previous studies done by IUHF (2000) which in its article titled "Source Book, Facts and Figures" argued that the UK system is funded almost exclusively through deposits to banks. The mortgage interest rate in UK is far much lower than the mortgage interest rate in Kenya.

The descriptive statistics findings above are summarized in Table 4.14 below.

Table 4.14: Descriptive Analysis for Housing Affordability among the Low Income Earners

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
a)Lowering price of houses would increase affordability of housing to the low income earners	18.3%	17.5 %	3.3%	28.3%	32.5%	3.4
b)Construction of low cost houses would increase affordability of housing to the low income earners	5.8%	10.8 %	3.3%	42.5%	37.5%	3.87
c)Increasing the supply of low cost houses would increase affordability of housing to the low income earners	8.4%	14.5 %	8.9%	39.7%	28.5%	3.65
d)Increasing the number of people who spend less than 30 % of their income on housing would increase affordability of housing to the low income earners	4.2%	22.5 %	6.7%	39.1%	27.5%	3.63
e)Increasing the number of those capable of qualifying for mortgage loans would increase affordability	9.5%	12.3 %	2.8%	45.8%	29.6%	3.74

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
of housing to the low income earners						
f)Innovation and adoption of modern building technology would increase affordability of housing to the low income earners	9.2%	19.2%	3.3%	39.1%	29.1%	3.61
g)Lowering of interest spread would increase affordability of housing to the low income earners	11.7%	15.1%	2.8%	38.0%	32.4%	3.64
h)Lowering mortgage interest rates would increase affordability of housing to the low income earners	8.3%	20%	7.5%	45%	19.1%	3.46
i)Delivering low income house in large scale would increase affordability of housing to the low income earners	10.8%	9.1%	15%	48.3%	16.7%	3.5
j)Depending on long term sources of capital by mortgage lenders would increase affordability of housing to the low income earners	2.8%	19.6%	2.8%	48.6%	26.3%	3.76
Average	**8.8%**	**16.2%**	**6.0%**	**41.4%**	**27.6%**	**3.63**

iv) Normality Test for Housing Affordability among the Low Income Earners

Figure 4.6 below shows the normality test of housing affordability which indicates that the dependent variable was normally distributed and that the probability of outliers was minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

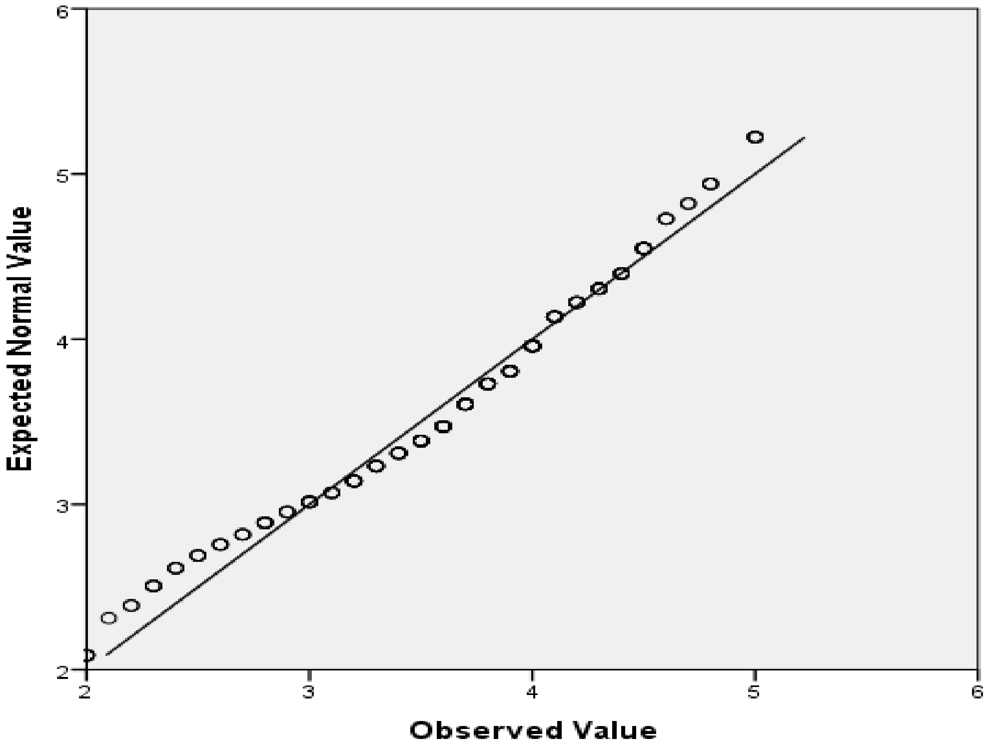

Figure 4.6: Normality Plot for Housing Affordability among the Low Income Earners

4.4.2 Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

i) Reliability Test

Using Cronbach‟s Coefficient Alpha test on the effects of the role of the National Government housing policy, a coefficient of 0.833 was found as shown in Table 4.15 These results corroborates findings by Sekaran (2003), Saunders Lewis and Thornhill (2009) and Christensen, Johnson and Turner (2011) who stated that scales of 0.7 and above, indicate satisfactory reliability. Based on these recommendations, the statements under the effects of the role of the National Government housing policy variable of this study were concluded to have adequate internal consistency, therefore, reliable for the analysis and generalization on the population.

Table 4.15: Reliability Test on Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Description	Indicator
Cronbach's Alpha	0.833
No of Items	20

ii) Factor Analysis

Factor Analysis was carried out to describe variability among the observed variables and check for any correlated variables with the aim of reducing data that was found redundant. Conventionally, statements scoring more than 30% which is the minimum requirement for inclusion of variables into the final model (Hair, Black, Babin & Anderson, 2010; Kothari, 2004) were included. Table 4.16 indicates that all the twenty statements attracted a coefficient of more than 0.3 (30%) hence were retained for further analysis.

Table 4.16: Factor Analysis on Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Statements	Factor Component
a)Reviewing of the building code to allow for use of modern and appropriate technology would lower the price of houses	0.390
b)Opening-up new areas for housing development through provision of trunk-infrastructure would increase the supply of low cost houses	0.493
c)Zero rating VAT on building materials used to construct houses would lower the price of houses	0.476
d)Establishment of a housing levy to enable the construction of low-income housing would lower the price of houses	0.423
e)Development of regulations to guide contractor-based finance would lead to the construction of more units of low cost housing	0.556
f)Restructuring the mandate of the National Housing Corporation to be	0.356

Statements	Factor Component
liaising with County Governments would lead to construction of more units of low cost housing	
g) Introduction of well-targeted direct mortgage subsidies for low income earners would increase the number of Kenyans capable of affording houses.	0.435
h)Offering guarantees and concessions to private local and foreign investors to develop housing infrastructure would encourage developers to construct more units of low cost housing	0.453
i)Tax holiday for developers and investors in housing units for low-income households would encourage developers to construct more units of low cost housing	0.532
j)Offering tax holiday to developers and investors of a minimum of one hundred serviced plots for low-income households would encourage developers to construct more units of low cost housing	0.571
k)Allowing access to pension benefits for payment of down payment for a house would increase the number of people able to obtain mortgage loans	0.561
l) Increasing efficiency and transparency in the registration of land transfers and charges would boost the development of the mortgage market.	0.515
m)Reducing taxes on profits made by lenders from low income house lending would lead to a reduction of mortgage interest rates	0.474
n)Setting up a mortgage development group made up of all related sectors stakeholders would lower mortgage interest rates	0.636
o)Establishment of mortgage consumer protection framework would increase mortgage loans uptake	0.564
p)Mortgage fund guarantee offered by the government to housing microfinance would lead to a reduction of mortgage interest rates	0.364
q)Prohibiting micro - finance institutions from collecting deposits tend to increase mortgage interest rates	0.562
r)Promoting participation of insurance companies and pensions funds in the housing finance market would increase the amount of long term funds available to mortgage providers	0.378
s)Allowing members of the public to use their life insurance scheme funds	0.563

Statements	Factor Component
as guarantee for housing loans would lower the amounts of the regular mortgage payments	
t)Involving more land-buying companies in the financial system would lead to the construction of more units of low cost housing	0.507

iii) Descriptive on Effects of the Role of the National Government Housing Policy on housing affordability among the Low Income Earners

a). Effect of Reviewing of the Building Code on the Price of Houses

Regarding the statement that reviewing of the building code to allow for use of modern and appropriate technology would lower the price of houses, 66.7% of the respondents strongly agreed, 25.8% agreed while 2.8% strongly disagreed and another 2.5% were neutral as shown on Table 4.17 below.

Table 4.17: Effect of Reviewing of the Building Code on the Price of Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	3	2.5	2.5
Disagree	3	2.5	5.0
Neutral	3	2.5	7.5
Agree	31	25.8	33.3
Strongly Agree	80	66.7	100
Total	120	100	

The study findings agree with those of UN-Habitat (2011) which in its article titled "Affordable Land and Housing in Africa" asserts that one major reason why housing is unaffordable for the urban poor majority in Africa is the high cost of building materials. They concluded that the problem with building materials arises because many governments, at central and local levels, insist on the use of conventional building materials and technologies. These are stipulated in building codes and regulations, many of which are a colonial heritage or adopted from foreign countries.

These standards and regulations prevent the use of readily available local building materials, and also the use of cost-effective and environmentally-friendly construction technologies. This causes the houses constructed to be out of reach of the low income earners.

These findings corroborate those of Arvanitis (2013) who in his article titled "African Housing Dynamics: Lessons from the Kenyan Market" argues that on the use of alternative building solutions, the market needs to be educated to accept different building solutions which are more suitable cost-wise to reaching medium/lower income segments. For instance greater investments into pre-fabricated houses can be more cost effective, and drastically reduce construction time. The study findings also concurs with those of government of Namibia (2013) which in her article titled "Summary of Blueprint on Mass Housing Development Initiative in Namibia," argues that utilization of alternative building methods, materials and technologies that are cost effective would increase affordability of housing.

The study findings also agree with those of Nordberg (2000) who in his article titled "Alleviating Poverty through Housing Development" asserts that in many countries, building regulations and codes prohibit the use of the only building materials the poor can afford: mud-bricks, compressed earth blocks, hand-made roofing tiles, or soil-cement flooring, etc. As the urban poor cannot afford to buy officially recognized building materials, they are obliged to build in informal areas where the building code is not enforced. However, as there are no standards for locally produced building materials, banks do not provide loans for houses built with local materials. He concludes that revision of building codes and establishment of technical norms and standards for local building materials will contribute indirectly to poverty alleviation through increased low-cost housing construction and employment.

b) Effect of Opening-Up New Areas for Housing Development through Provision of Trunk-Infrastructure on the Supply of Low Cost Houses

Figure 4.7 illustrates that 40.2% of the respondents agreed and another 23.7% strongly agreed that opening-up new areas for housing development through provision of trunk-infrastructure would increase the supply of houses. A further 18.9% of the respondents disagreed while 11.8% strongly disagreed and 5.3% were neutral as shown in Figure 4.7 below.

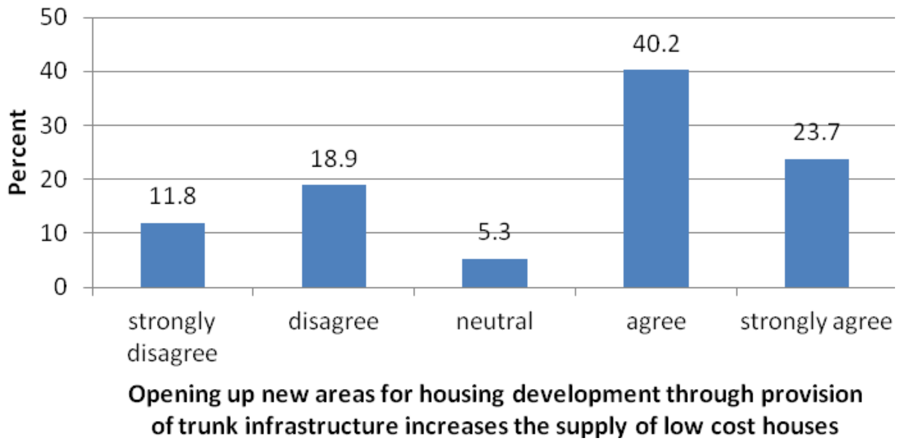

Figure 4.7: Effect of Opening-Up New Areas for Housing Development through Provision of Trunk-Infrastructure on the Supply of Low Cost Houses

The study findings also agree with those of CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that lack of public bulk infrastructure adds to the cost of production, and the housing affordability gap, and often deters private house builders from entering the market. Okonkwo (1998) in his paper titled "Housing Finance and Housing Delivery Systems in Kenya: Bottlenecks, Recent Developments and the Way Forward" posits that a combination of factors, including lack of serviced land has generally slowed down private investments in housing.

c) Effect of Zero Rating VAT on Building Materials on the Price of Houses

A majority (66.3%) of the respondents strongly agreed and agreed that zero rating VAT on building materials used to construct houses would lower the price of houses. The findings on Figure 4.8 confirmed that zero rating VAT on building materials used to construct houses influences affordability of houses.

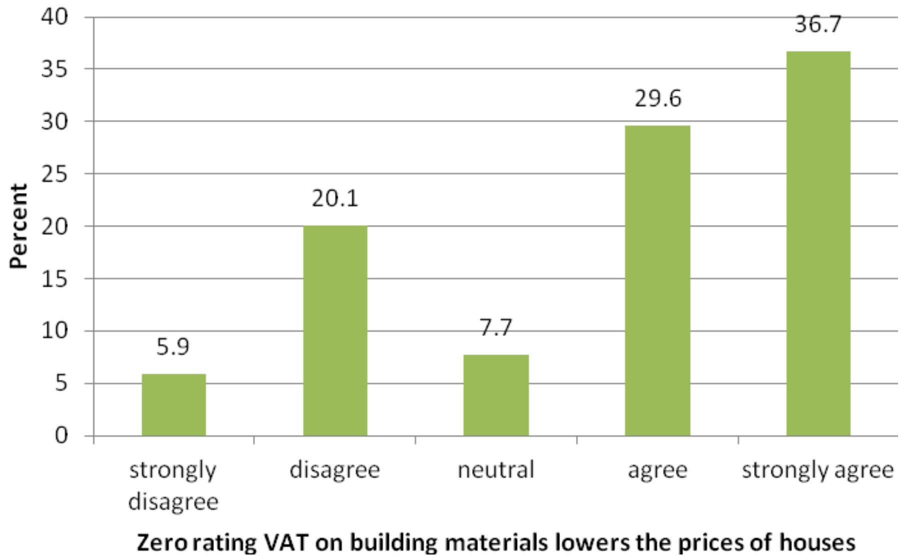

Figure 4.8: Effect of Zero Rating VAT on Building Materials on the Price of Houses

Similar results have been reported by Okonkwo (1998) who in his paper titled "Housing Finance and Housing Delivery Systems in Kenya: Bottlenecks, Recent Developments and the Way Forward" posits that a combination of factors, including high costs of construction has generally slowed down private investments in housing. These findings are also consistent with those ones of CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that tax allowances offered for private investment in off-site bulk infrastructure provision, such as roads, power, water and sewerage networks, which become a public good would increase affordability of houses.

d) Effect of Establishment of a Housing Levy on the Price of Houses

Most of the respondents (30.8%) strongly agreed that establishment of a housing levy to enable the construction of low-income housing would lower the price of houses in Kenya. The findings further indicated that 30% of the respondents agreed that establishment of a housing levy to enable the construction of low-income housing would lower the price of houses in Kenya. Table 4.18 presents the findings.

Table 4.18: Effect of Establishment of a Housing Levy on the Price of Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	15	12.5	12.5
Disagree	20	16.7	29.2
Neutral	12	10	39.2
Agree	36	30	69.2
Strongly Agree	37	30.8	100
Total	120	100	

e) Effect of Development of Regulations to Guide Contractor-Based Finance on the Construction of Units of Low Cost Housing

A majority (60%) of the respondents agreed and strongly agreed that development of regulations to guide contractor-based finance would lead to the construction of more units of low cost housing. The findings also showed that 15.8% of the respondents strongly disagreed and 14.2% disagreed that development of regulations to guide contractor-based finance would lower the price of houses. Results are presented on Table 4.19.

Table 4.19: Effect of Development of Regulations to Guide Contractor-Based Finance on the Construction of Units of Low Cost Housing

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	19	15.8	15.8
Disagree	17	14.2	30
Neutral	12	10	40
Agree	40	33.3	73.3
Strongly Agree	32	26.7	100
Total	120	100	

These findings corroborate those of Diouf (2013), who in his article titled "State of Housing Microfinance in Africa" argues that the way forward is to intervene in the value chain by financing contractors, suppliers as well as end users. An integrated approach will reduce risk, improve revenue generation and increase affordability of housing.

These findings are also consistent with those ones of Nordberg (2000) who in his article titled "Alleviating Poverty through Housing Development" asserts that small-scale contractors can play an important role in poverty alleviation because they use unskilled labour, local materials and labour-intensive techniques. He concludes that their growth is constrained by many factors, such as lack of access to markets, finance, vocational training, equipment and information. Public agencies tend to favour large-scale public or private enterprises through various practices and procedures such as tender conditions that call for large financial capacity, machinery and equipment, cheap credit, preferential pricing, building material concessions, specifications calling for high-tech building techniques and materials.

He recommends that ways to support the small-scale formal and informal sector contractors should include: development of mechanisms to make credit available to small scale contractors; targeted procurement, where instead of minimum financial capacity, the procurement conditions could exclude the contractors above a certain financial capacity; revision of regulations on preferential pricing and building;

splitting large contracts into several smaller contracts; creating a revolving fund for equipment procurement; provision of training in tendering and contract management facilitating access to credit. This would increase house affordability.

f) Effect of Restructuring the Mandate of the National Housing Corporation for it to be Liaising with County Governments on the Construction of Units of Low Cost Housing

The respondents were asked to indicate whether restructuring the mandate of the National Housing Corporation to be liaising with County Governments would lead to construction of more units of low cost housing. Figure 4.9 indicates that 50.9% of the respondents strongly agreed, 20.1% agreed, 12.4% strongly disagreed and another 12.4% disagreed with the statement.

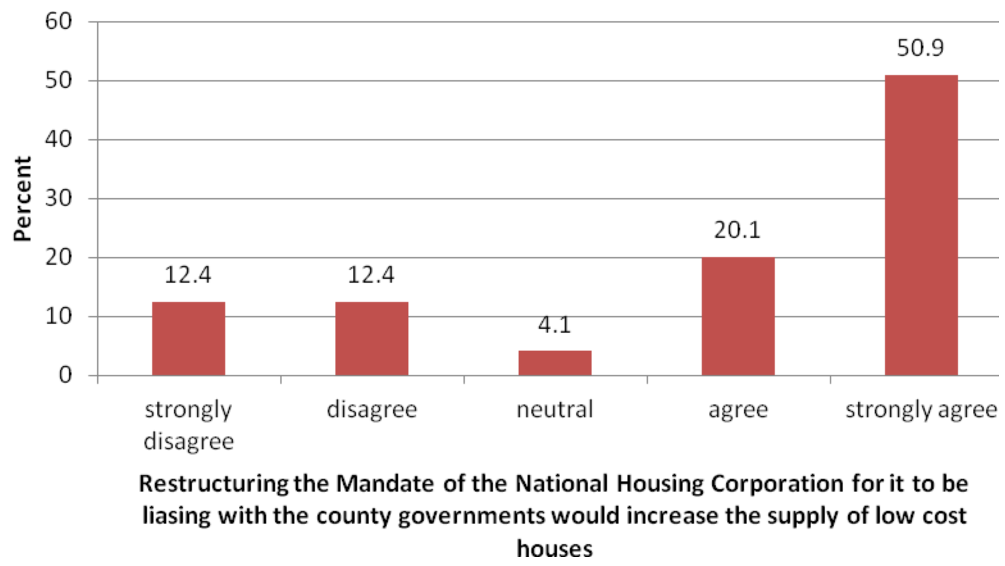

Figure 4.9: Effect of Restructuring the Mandate of the National Housing Corporation for it to be Liaising with County Governments on the Construction of Units of Low Cost Housing

g) Effect of Introduction of Well-Targeted Direct Mortgage Subsidies on the Number of Kenyans Capable of Affording Houses.

Figure 4.10 shows that 49.7% of the respondents strongly agreed and another 30.8% agreed bringing to a total of 80.5% of those who agreed that introduction of well-targeted direct mortgage subsidies for low income earners would increase the number of Kenyans capable of affording houses.

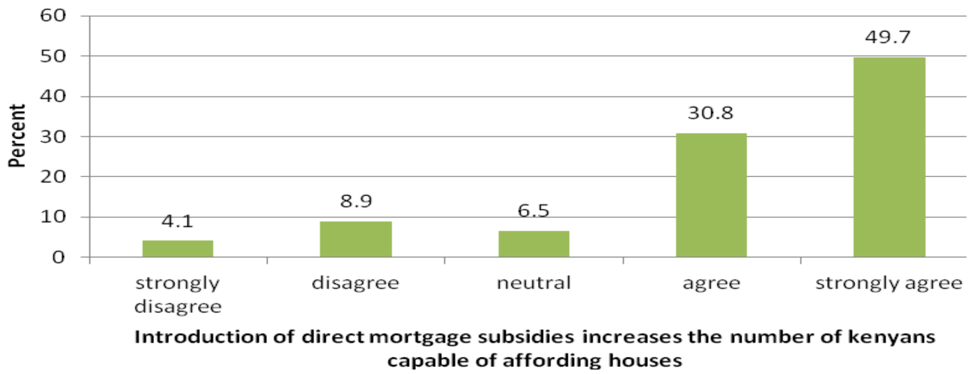

Figure 4.10: Effect of Introduction of Well-Targeted Direct Mortgage Subsidies the number of Kenyans Capable of Affording Houses.

These findings corroborate those of Martin and Mathema (2008) who in their article titled “Housing Finance for the Poor in Morocco Programs, Policies and Institutions” posits that subsidies for the poor for urban land and infrastructure are often essential in addressing the housing affordability issue, especially the provision of partially serviced plots which provides an affordable option to both the state and the occupants. The study findings also agree with those of Government of namibia (2013) which in her article titled “summary of Blueprint on Mass Housing Development Initiative in Namibia,” argues that subsidization by the Government of selected groups of people who are unable to qualify for credit facilities rendered by the financial service sector would increase affordability of housing.

The study findings are also supported by the experience in Chile which has managed to greatly reduce its housing backlog through prioritising spending on housing.Chile spends about 6% of total government expenditure on housing, whereas the international average for developing countries is about 2% (Gilbert, 2004). It has been noted that the relative success of the Chilean housing subsidy system is due to "the sustainability over time of the budgetary resources earmarked for the provision of subsidies" (Gonzales, 1999). An average of 116 000 houses per year were built during the 1990s, and the housing backlog decreased from about 800,000 in 1990 to a level of about 200,000 in 2002 (Sugranyes, 2002).

h) Effect of Offering Guarantees and Concessions to Private Local and Foreign Investors on Construction of Units of Low Cost Housing

A majority (76.3%) of the respondents strongly agreed and agreed that offering guarantees and concessions to private local and foreign investors to develop housing infrastructure would encourage developers to construct more units of low cost housing. The findings further showed that 11.2% disagreed and 4.1% strongly disagreed as shown in Figure 4.11.

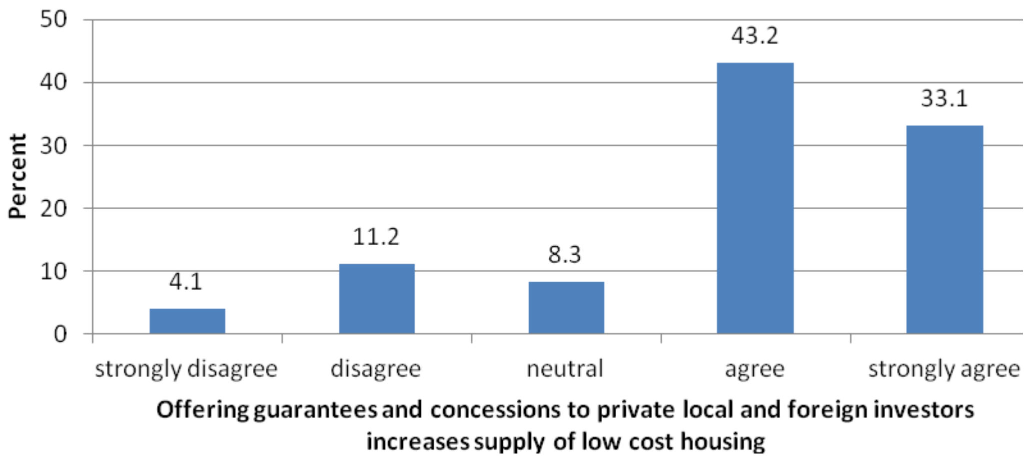

Figure 4.11: Effect of Offering Guarantees and Concessions to Private Local and Foreign Investors on Construction of Units of Low Cost Housing

i) Effect of Tax Holiday for Developers and Investors in Low Cost Housing on Construction of Units of Low Cost Housing

A majority (84.2%) of the respondents agreed and strongly agreed that tax holiday for developers and investors in housing units for low-income households would encourage developers to construct more units of low cost housing. The results are presented on Table 4.20**.**

Table 4.20: Effect of Tax Holiday for Developers and Investors in Low Cost Housing on Construction of Units of Low Cost Housing

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	2	1.6	1.6
Disagree	14	11.7	13.3
Neutral	3	2.5	15.8
Agree	54	45	60.8
Strongly Agree	47	39.2	100
Total	120	100	

The study findings agree with those of Aissami (2012**)** who in his article titled "Affordable Housing Finance in Morocco" indicates that developers who commit to produce at least 500 social housing units over 5 years do not have to pay income tax on revenue generated by the activity. He asserts that since 2011 agreements have been signed with developers for production of almost one million social housing units over the next five years thereby increasing the supply of low cost housing.

These findings are also consistent with those ones of Manoj (2010) who in his article titled "Prospects and Problems of Housing Microfinance in India: Evidence from "Bhavanashree" Project in Kerala State' asserts that developers are provided incentives in the form of tax reductions or tax exemptions and as a result, China has developed more than 20 million housing units during the last five years.

These findings also concur with those of Otiso, (2003) who in his article "State, Voluntary and Private Sector Partnerships for Slum Upgrading and Basic Service

Delivery in Nairobi City," noted that the private sector in Kenya, both formal and informal, remains the largest producer of housing units in the country. Initiatives by the private sector can be both large-scale and deep in impact, contrary to the government initiatives which may be large-scale but usually limited in impact. He asserts that offering them incentives in the form of tax holidays can encourage them to develop more units of low cost housing.

j) Effect of Tax Holiday to Developers and Investors for Serviced Plots on Construction of Units of Low Cost Housing

Figure 4.12 indicates that 65.1% of the respondents agreed and strongly agreed that offering tax holiday to developers and investors of a minimum of one hundred serviced plots for low-income households would encourage developers to construct more units of low cost housing. In addition, 17.2% disagreed while 12.4% strongly disagreed and 5.3% were neutral.

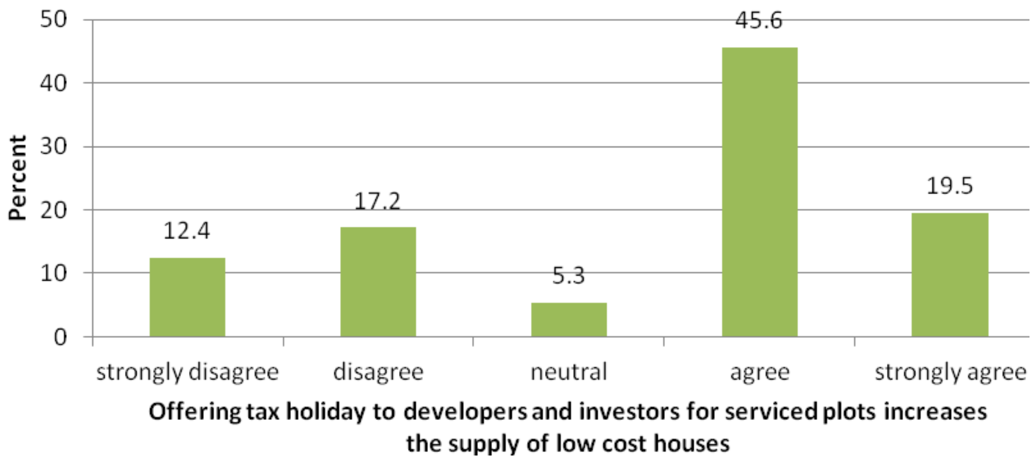

Figure 4.12: Effect of Tax Holiday to Developers and Investors for Serviced Plots on Construction of Units of Low Cost Housing

Similar results have been reported by the Government of namibia (2013) which in her article titled "Incremental Housing Micro-Finance and Land Tenure; The Case of Kixi Crédito Angola," asserts that the private real estate developers largely shy away from providing low-income housing, in spite of having a large market and huge demand for this type of product. They argue that incentives such as tax holidays would encourage the developers to address the housing needs of the lower income earners. These findings are consistent with those ones of Otiso, (2003) who in his paper titled “State, Voluntary and Private Sector Partnerships for Slum Upgrading and Basic Service Delivery in Nairobi City, Kenya” asserts that, low-income housing has limited profit-making opportunities. Tax holidays for developers can encourage them to build more units of low cost housing.

k) Effect of Access to Pension Benefits for Mortgage down Payment on the Number of People Able to Obtain Mortgage Loans

Regarding the statement that allowing access to pension benefits for payment of down payment for a house would increase the number of people able to obtain mortgage loans, 53.3% agreed, 21.7% strongly agreed while 19.2% disagreed and 4.2% strongly disagreed as shown on Table 4.21.

Table 4.21: Effect of Access to Pension Benefits for Mortgage down Payment on the Number of People Able to Obtain Mortgage Loans

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	5	4.2	4.2
Disagree	23	19.2	23.4
Neutral	2	1.6	25
Agree	64	53.3	78.3
Strongly Agree	26	21.7	100
Total	120	100	

The study findings also agree with those of Chia and Tsui, (2005) who asserts that in 1955, the Singaporean Government instituted a fully funded defined contribution fund to take care of employees in retirement. Every employer and employee was required to contribute a certain proportion to the Central Provident Fund (CPF). In 1968, the fund was enhanced to allow members to withdraw their savings to finance the purchase public houses. The funds can also be used for down payments, mortgage payments, interest on loans and stamp duty. This has played a major role in encouraging home ownership in Singapore. In comparison to Japan, UK, France, Singapore has the highest ratio of household residential property. House ownership stood at 88.6% in 2011 (Government of Singapore, 2011).

l) Effect of Increased Efficiency and Transparency in the Registration of Land Transfers on Construction of More Units of Low Cost Housing.

The respondents were asked to indicate whether increasing efficiency and transparency in the registration of land transfers and charges would encourage developers to construct more units of low cost housing. Figure 4.13 reveals that 51.5% of the respondents agreed while 16% strongly agreed and 15.4% of the respondents disagreed that increasing efficiency and transparency in the registration of land transfers and charges would encourage developers to construct more units of low cost housing.

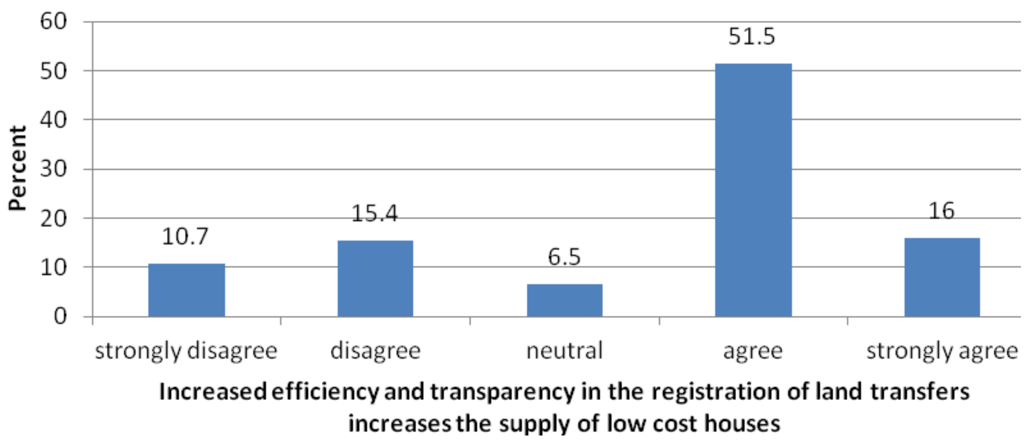

Figure 4.13: Effect of Increased Efficiency and Transparency in the Registration of Land Transfers on Construction of More Units of Low Cost Housing

These findings are consistent with those ones of World Bank (2011) which in its article titled "Developing Kenya's Mortgage Market" asserts that there is need to review property registration system so as work towards a one-stop shop with unified database. Numerous reports all point towards the need of a unified land and property registration titling and registration system. They argued that a simpler, more secure, reliable process which is both cheap and efficient could significantly boost the development of the mortgage market.

The study findings also concur with those of Government of namibia (2013) which in her article titled “Summary of Blueprint on Mass Housing Development Initiative in Namibia,” argues that the various cumbersome procedures applicable in the process of acquiring a property do have a bearing on escalating property prices. Similar findings were shown in a study by Arvanitis (2013) who in his article titled “African Housing Dynamics: Lessons from the Kenyan Market” argues that the importance of efficient land registration and regulation for land acquisition was highlighted as being particularly central for the development of housing markets.

m) Effect of Reduction of Taxes on Profits Made By Lenders from Low Income House Lending on Mortgage Interest Rates.

Table 4.22 indicates that majority (75%) of the respondents agreed and strongly agreed that reducing taxes on earnings on profits made by lenders from low income house lending would lead to a reduction of mortgage interest rates.

Table 4.22: Effect of Reduction of Taxes on Profits Made By Lenders from Low Income House Lending on Mortgage Interest Rates.

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	9	7.5	7.5
Disagree	12	10	17.5
Neutral	9	7.5	25
Agree	56	46.7	71.7
Strongly Agree	34	28.3	100
Total	120	100	

n) Effect of Setting up a Mortgage Development Group Made of All Related Stakeholders on Mortgage Interest Rates.

Most of the respondents (74.2%) agreed and strongly agreed while 15.8% disagreed and 5.8% strongly disagreed that setting up a mortgage development group made up of all related sectors stakeholders would lower mortgage interest rates as shown in Table 4.23 below.

Table 4.23: Effect of Setting up a Mortgage Development Group Made up of All Related Stakeholders on Mortgage Interest Rates

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	7	5.8	5.8
Disagree	19	15.8	21.6
Neutral	5	4.2	25.8
Agree	52	43.4	69.2
Strongly Agree	37	30.8	100
Total	120	100	

The study findings agree with those of World Bank (2011) which in its article titled "Developing Kenya's Mortgage Market" asserts that there are multiple interested participants in the mortgage market and the related sectors such as construction, housing, capital markets, as well as government departments and civil society. They propose that a policy group should be convened under the auspices of the CBK or a government department to help drive and direct the change process, and to provide inputs into work as it progresses. Such a mortgage development group would articulate issues related to mortgage policy and would address various issues affecting the industry including the high mortgage rates.

o) Effect of Establishment of a Mortgage Consumer Protection Framework on Uptake of Mortgage Loans

Regarding the statement that establishment of mortgage consumer protection framework would increase mortgage loans uptake, 41.4% agreed, 34.9% strongly agreed while 15.4% disagreed and 4.7% strongly disagreed as shown in Figure 4.14.

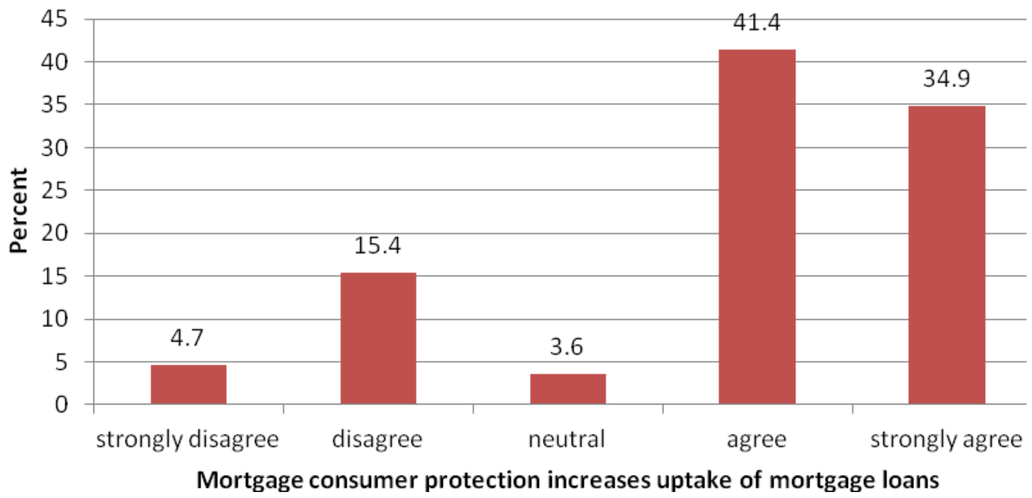

Figure 4.14: Effect of Establishment of a Mortgage Consumer Protection Framework on Uptake of Mortgage Loans

These findings are consistent with those ones of World Bank (2011) which in its article titled "Developing Kenya's Mortgage Market" asserts that **i**ntroducing a consumer protection framework and mortgage financial literacy campaign is important in Kenya's mortgage market. They conclude that as the market grows, it is important that it is underpinned by confidence on the part of consumers. It would be worth considering introducing some mechanisms for ensuring minimum levels of disclosure, complaints handling procedures and adjudication processes. This would have an effect of increasing the uptake of mortgage loans by mortgage borrowers.

p) Effect of Mortgage Fund Guarantee Offered by the Government to Housing Microfinance on the Mortgage Rate of Interest

Figure 4.15 indicates that 68.1% of the respondents agreed and strongly agreed that mortgage fund guarantee offered by the government to housing microfinance would reduce the mortgage rate of interest **(**Figure 4.15).

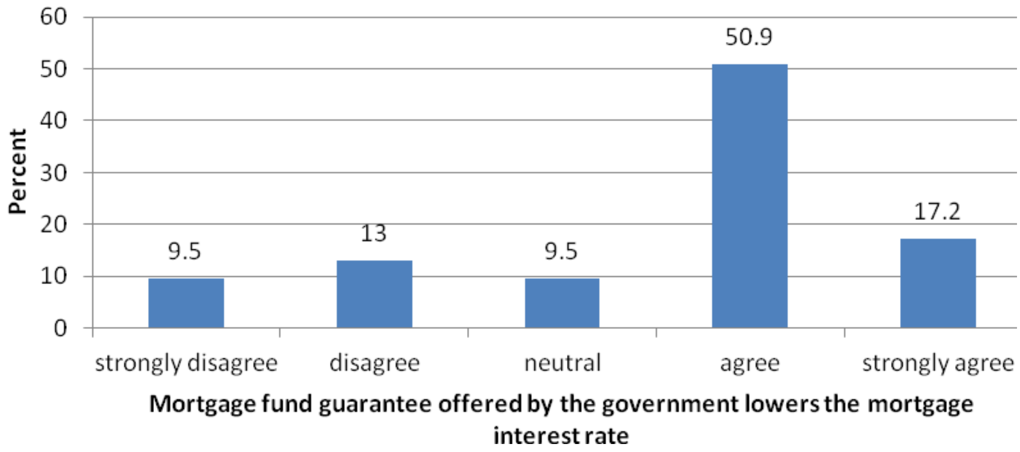

Figure 4.15: Effect of Mortgage Fund Guarantee Offered by the Government to Housing Microfinance on the Mortgage Rate of Interest

These findings corroborate those ones of Belhaj (2008) who in his article titled "Morocco's Fogarim Fund Benefits Aspiring Homeowners" indicated that as result of contractors benefiting from the fogarim program where the government guarantees the loans they borrow from financial institutions, they are charged low rates of interest and as result they are able to build low-cost housing units and sell them for low prices.

q) Effect of Prohibiting Micro–Finance Institutions from Collecting Deposits on Mortgage Interest Rates

On the statement whether prohibiting micro-finance institutions from collecting deposits tend to increase mortgage interest rates, 45.6% of the respondents strongly agreed, 24.3% agreed, 16% strongly disagreed while 8.9% disagreed and 5.3% of the respondents were neutral as shown in Figure 4.16 below.

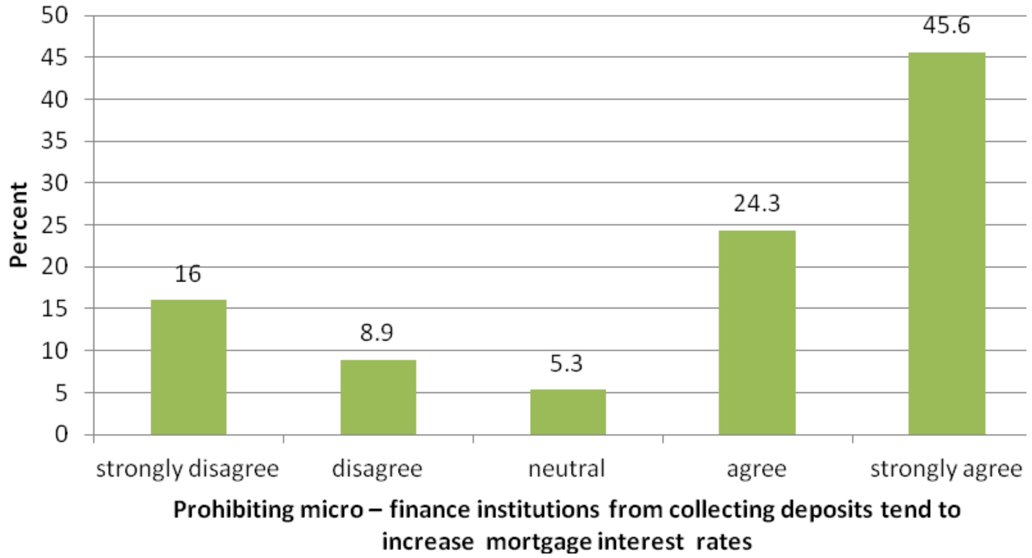

Figure 4.16: Effect of Prohibiting Micro – Finance Institutions from Collecting Deposits on Mortgage Interest Rates

r) Effect of Participation of Insurance Companies and Pension Funds in the Housing Finance Market on Availability of Long Term Funds for Mortgage Providers

Majority (79.2%) of the respondents agreed and strongly agreed that promoting participation of insurance companies and pensions funds in the housing finance market would increase availability of long term funds for mortgage providers as shown in Figure 4.17.

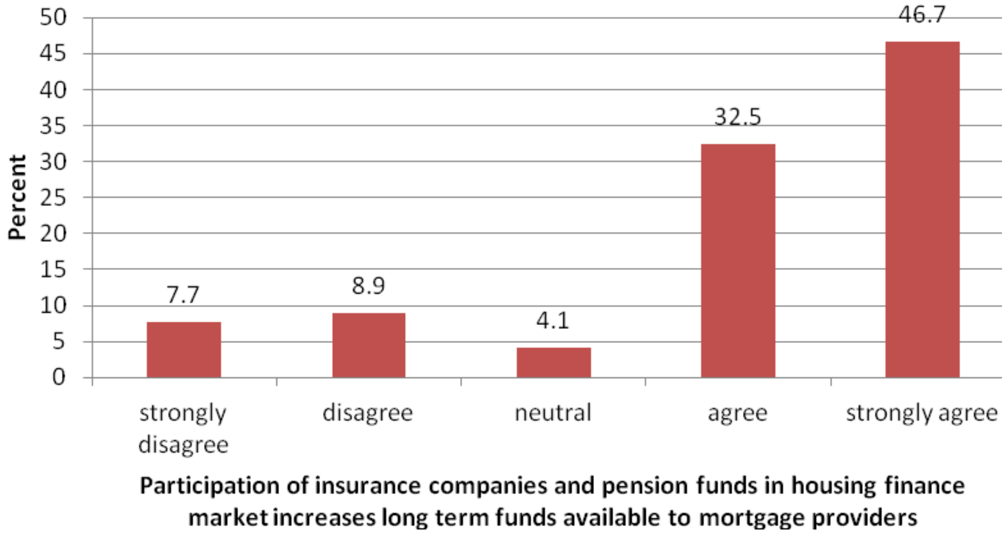

Figure 4.17: Effect of Participation of Insurance Companies and Pension Funds in the Housing Finance Market on availability of Long Term Funds for Mortgage Providers

These findings are consistent with those ones of World Bank (2011) which in its article titled "Developing Kenya's Mortgage Market" argues that the capital markets in many economies provide an attractive and potentially large source of long-term funding for housing. Pension and insurance reform has created large and rapidly growing pools of funds. The advent of institutional investors has given rise to skills necessary to manage the complex risks associated with housing finance. The creation of mortgage-related securities (bonds, pass-throughs, and structured finance instruments) has provided the multiple instruments by which housing lenders can access these important sources of funds and better manage and allocate part of their risks.

s) Effect of Use of Life Insurance Scheme Funds as Guarantee for Mortgage Loans on the amounts of Regular Mortgage Payments

Forty four point two (44.2%) of the respondents strongly agreed that allowing members of the public to use their life insurance scheme funds as guarantee for housing loans would lower the amounts of the regular mortgage payments while another 33.3% agreed (Table 4.24).

Table 4.24: Effect of Use of Life Insurance Scheme Funds as Guarantee for Mortgage Loans on the amounts of Regular Mortgage Payments

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	10.8	10.8
Disagree	9	7.5	18.3
Neutral	5	4.2	22.5
Agree	40	33.3	55.8
Strongly Agree	53	44.2	100
Total	120	100	

t) Effect of Involving more Land-Buying Companies in the Financial System on the Construction of Units of Low Cost Housing

Majority (75.7%) of the respondents agreed and strongly agreed that involving more land-buying companies in the financial system would lead to the construction of more units of low cost housing. A further 7.7% disagreed while 7.1% strongly disagreed and 9.5% were neutral (Figure 4.18).

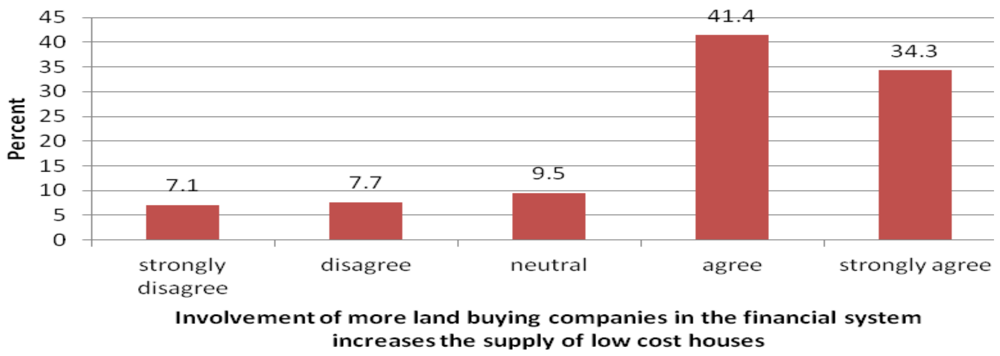

Figure 4.18: Effect of Involving more Land-Buying Companies in the Financial System on the Construction of Units of Low Cost Housing

The descriptive statistics findings above are summarized in Table 4.25 below

Table 4.25: Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
a) Reviewing of the building code to allow for use of modern and appropriate technology would increase the supply of low cost houses	2.5%	2.5%	2.5%	25.8%	66.7%	4.50
b) Opening-up new areas for housing development through provision of trunk-infrastructure would lower the price of houses	11.8%	18.9%	5.3%	40.2%	23.7%	3.45
c) Zero rating VAT on building materials used to construct houses would lower the price of houses	5.9%	20.1%	7.7%	29.6%	36.7%	3.71
d) Establishment of a housing levy to enable the construction of low-income housing would lower the price of houses	12.5%	16.7%	10%	30%	30.8%	3.49
e)Development of regulations to guide contractor-based finance would lead to the construction of more units of low cost housing	15.8%	14.2%	10%	33.3%	26.7%	3.41
f) Restructuring the mandate of the National Housing Corporation to be liaising with County Governments would lead to construction of more units of low cost housing	12.4%	12.4%	4.1%	20.1%	50.9%	3.85
g) Introduction of well-targeted direct mortgage subsidies for low income earners would increase the number of Kenyans capable of	4.1%	8.9%	6.5%	30.8%	49.7%	4.13

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
affording houses.						
h) Offering guarantees and concessions to private local and foreign investors to develop housing infrastructure would encourage developers to construct more units of low cost housing	4.1%	11.2%	8.3%	43.2%	33.1%	3.90
i) Tax holiday for developers and investors in housing units for low-income households would encourage developers to construct more units of low cost housing	1.6%	11.7%	2.5%	45.0%	39.2%	4.07
j) Offering tax holiday to developers and investors of a minimum of one hundred serviced plots for low-income households would encourage developers to construct more units of low cost housing	12.4%	17.2%	5.3%	45.6%	19.5%	3.43
k) Allowing access to pension benefits for payment of down payment for a house would increase the number of people able to obtain mortgage loans	4.2%	19.2%	1.6%	53.3%	21.7%	3.65
l)Increasing efficiency and transparency in the registration of land transfers and charges would boost the development of the mortgage market.	10.7%	15.4%	6.5%	51.5%	16.0%	3.47
m) Reducing taxes on earnings on profits made by lenders from low income house lending would lead to a reduction of mortgage interest rates	7.5%	10.0%	7.5%	46.7%	28.3%	3.76
n) Setting up a mortgage	5.8%	15.8%	4.2%	43.4%	30.8%	3.78

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
development group made up of all related sectors stakeholders would lower mortgage interest rates						
o) Establishment of mortgage consumer protection framework would increase mortgage loans uptake	4.7%	15.4%	3.6%	41.4%	34.9%	3.86
p) Mortgage fund guarantee offered by the government to housing microfinance would lower lead to a reduction of mortgage interest rates	9.5%	13.0%	9.5%	50.9%	17.2%	3.53
q) Prohibiting micro – finance institutions from collecting deposits tend to increase mortgage interest rates	16.0%	8.9%	5.3%	24.3%	45.6%	3.75
r)Promoting participation of insurance companies and pensions funds in the housing finance market would increase the amount of long term funds available to mortgage providers	7.7%	8.9%	4.1%	32.5%	46.7%	4.02
s)Allowing members of the public to use their life insurance scheme funds as guarantee for housing loans would lower the amounts of the regular mortgage payments	10.8%	7.5%	4.2%	33.3%	44.2%	3.92
t) Involving more land-buying companies in the financial system would lead to the construction of more units of low cost housing	7.1%	7.7%	9.5%	41.4%	34.3%	3.88
Average	**8.5%**	**12.8%**	**5.9%**	**37.9%**	**34.8%**	**3.78**

The mean score of responses regarding the effects of the role of the National Government housing policy and affordability among the low income earners in

Kenya are as follow: 34.8% strongly agreed, 37.9% agreed while 5.9% were neutral, 12.8% disagreed and 8.5% strongly disagreed.

These findings are consistent with those ones of UN-Habitat (2011) which in its article titled “Affordable Land and Housing In Africa” asserts that reviewing legal and regulatory frameworks is an important way for governments, at both central and local levels, to play the facilitating role recommended in the GSS and Habitat Agenda in order to enable the poor and other vulnerable and disadvantaged groups, including women, to access adequate, secure and affordable housing. They posit that the overall legal and regulatory framework for the housing sector has a significant impact on housing adequacy and affordability. Therefore, frameworks must be reviewed on a regular basis if the goal of adequate shelter for all is to be achieved.

The findings are further supported by United Nations (2005) in its article titled “Housing Finance Systems for Countries in Transition: Principles and Examples” which indicated that in order to benefit from the positive effects of a functioning house finance for the whole economy, emphasis on the legal, institutional and macroeconomic framework is the decisive factor because as soon as a functioning and reliable framework conditions are in place, financing techniques will emerge since borrowers and lenders are able to take informed decisions on risks in long-term obligations.

The study findings further agree with those of Chambers, Garriga and Schlagenhauf (2006) who in their article “The Loan Structure and Housing Tenure Decisions in an Equilibrium Model of Mortgage Choice*”* noted that the previous large increase in the home ownership rate in USA occurred after World War II and the Korean War when the government guaranteed the payments of principal and interest so that returning war veterans did not have to make a down payment. Relaxing this constraint was the major incentive which helped veterans become homeowners.

The study findings also concur with those of Arrieta (2005) who in his article “Mortgage Loans and Access to Housing for Low-Income Households in Latin

America” noted that more recently, in Latin America there has been a tendency for the State to withdraw from the direct building and financing of housing, and to begin playing a basically regulatory role as well as promoting private initiative. He asserts that this means that in low-income societies, where broad sectors of the population have little purchasing power, the State is necessary not only to act as a regulator but also to help provide these sectors with greater access to housing.

iv) **Pearson Correlation Coefficient between the Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners**

Correlation between variables is a measure of how well the variables are related. The most common measure of correlation in statistics is the Pearson Correlation (technically called the Pearson Product Moment Correlation or PPMC), which shows the linear relationship between two variables. Results are between -1 and 1. A result of -1 means that there is a perfect negative correlation between the two values, while a result of 1 means that there is a perfect positive correlation between the two variables. Result of 0 means that there is no correlation between the two variables (Gujarat, 2004). The Pearson correlation results from this study are shown in Table 4.26 and it reveals that there is a 0.467 positive correlation between the effects of the role of the National Government housing policy and housing affordability among low income earners.

Table 4.26: Pearson Correlation Coefficient between the Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners

Variable		Housing Affordability	National Govt
Housing Affordability	Pearson Correlation	1	0.467
	Sig. (2-tailed)		0.000
National Govt	Pearson Correlation	0.467	1
	Sig. (2-tailed)	0.000	

v) Linear Regression between the Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners

In this section, the research hypothesis was tested and results presented. Reference was made to the conceptual framework in Figure 2.1 and the proposed hypothesis (H_{01}). On account of the scatter plots shown in Figure 4.19, the study assumed a linear relationship between the effects of the role of the National Government housing policy and housing affordability among the low income earners in Kenya. A look at the scatter plot suggests a positive linear relationship between the effects of the role of the National Government housing policy and housing affordability among the low income earners in Kenya. The ordinary least square (OLS) method of estimation was adopted in examining the relationship between the predictors and the dependent variable. OLS allowed for derivation of a regression line of best fit while keeping the errors at minimum.

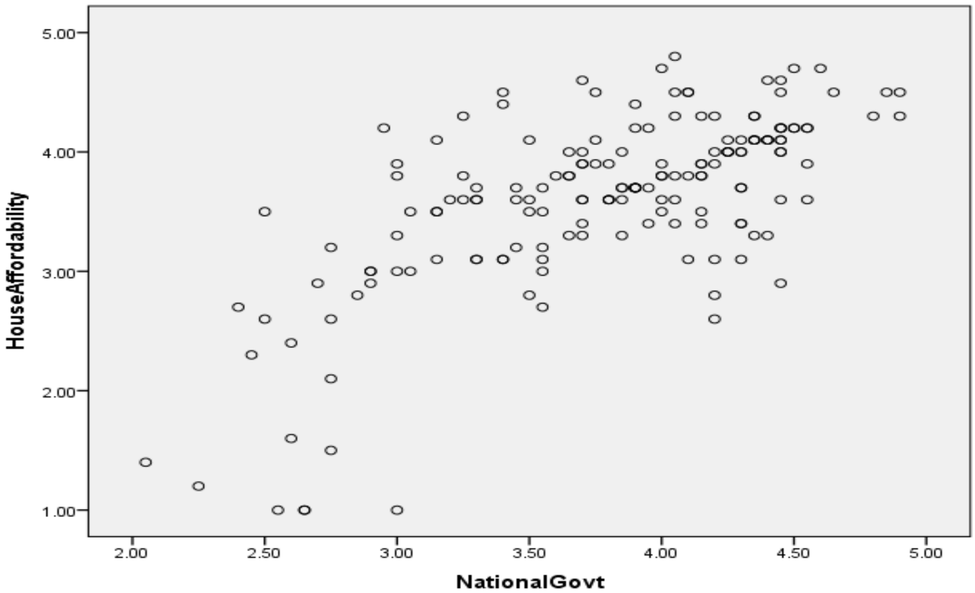

Figure 4.19: Scatter Plots of the Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners

Regression analysis was conducted to empirically determine whether the effects of the role of the National Government housing policy was a significant determinant of housing affordability among the low income earners. Regression results in Table 4.27 indicate the goodness of fit for the regression between the effects of the role of the National Government housing policy and housing affordability among the low income earners in Kenya was satisfactory. An R squared of 0.218 indicates that 21.8% of the variances in the housing affordability among the low income earners in Kenya are explained by the variances in the roles played by the effects of the National Government housing policy.

Table 4.27: Model Summary for the Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Indicator	Coefficient
R	0.467
R Square	0.218
Std. Error of the Estimate	0.62595

The model significance is presented in Table 4.28. An F statistic of 49.454 indicated that the model is significant. This is supported by a probability value of 0.000. The reported probability (0.000) is less than the conventional probability (0.05). The model applied can significantly predict the change in the housing affordability among the low income earners in Kenya. The study, therefore, fails to accept the null hypothesis, H_{01} at 95% confidence interval and concludes that there is a significant relationship between the effects of the role of the National Government housing policy and housing affordability among the low income earners in Kenya.

Table 4.28: ANOVA for the Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	19.377	1	19.377	49.454	0.000
Residual	69.35	119	0.392		
Total	88.727	120			

The effects of the role of the National Government housing policy coefficients are presented in Table 4.29. The results show that National Government contributes significantly to the model since the p-value is 0.000. This implies that the effects of the role of the National Government housing policy is statistically significant in explaining housing affordability among the low income earners in Kenya.

Table 4.29: Coefficients of Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Variable	Beta	Std. Error	t	Sig.
Constant	1.779	0.267	6.67	0.000
National Govt	0.498	0.071	7.032	0.000

LIHA = 1.779+ 0.498 NAT GOV + μ

vi) Normality Test for Effects of the Role of the National Government Housing Policy on Housing Affordability among the Low Income Earners

Figure 4.20 below shows the normality test of the effects of the role of the National Government housing policy which indicates that the dependent variable was normally distributed and that the probability of outliers was minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

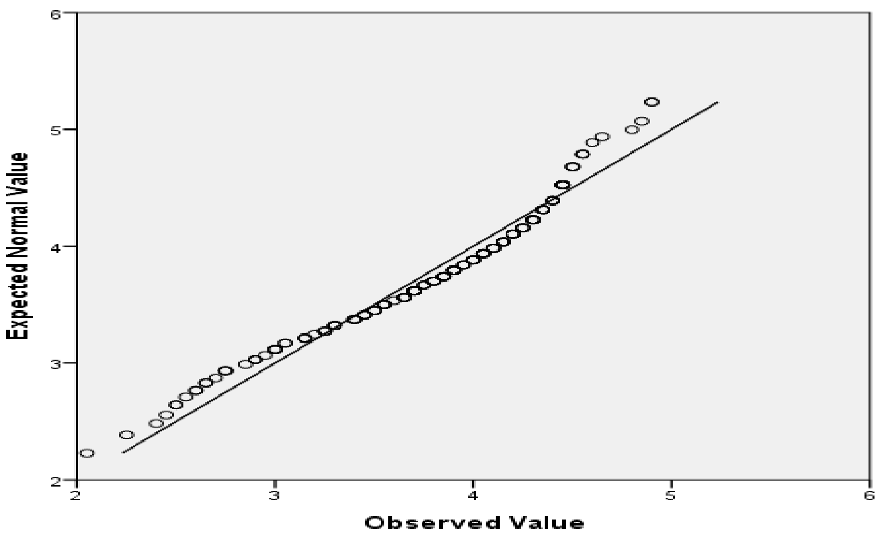

Figure 4.20: Normality Plot on Effects of the Role of the National Government Housing Policy on Housing affordability among the Low Income Earners

4.4.3 Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

i) Reliability Test

Using Cronbach's Coefficient Alpha test on the effects of the role of the County Governments' housing policy on housing affordability**,** a coefficient of 0.756 was found as shown in Table 4.30. These results corroborates findings by Sekaran (2003), Saunders Lewis and Thornhill (2009) and Christensen, Johnson and Turner (2011) who stated that scales of 0.7 and above, indicate satisfactory reliability. Based on these recommendations, the statements under the effects of the role of the County Governments housing policy variable of this study were concluded to have adequate internal consistency, therefore, reliable for the analysis and generalization on the population.

Table 4.30: Reliability Test on the Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Description	Indicator
Cronbach's Alpha	0.756
No of Items	10

ii) Factor Analysis

Factor Analysis was carried out to describe variability among the observed variables and check for any correlated variables with the aim of reducing data that was found redundant. Conventionally, statements scoring more than 30% which is the minimum requirement for inclusion of variables into the final model (Hair et al., 2010; Kothari, 2004) were included. Table 4.31 indicates that all the ten statements attracted a coefficient of more than 0.3 (30%) hence were retained for further analysis.

Table 4.31: Factor Analysis on the Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Statements	Factor Component
a) Developing low cost housing in areas where land is not very expensive would lower the price of houses	0.550
b) Enhancement of the planning and management of house building approvals at the County level would lower the price of houses	0.549
c) Improvement of revenue generation capacity of County Governments would increase the supply of low cost houses	0.537
d) Opening-up new areas within the counties for low cost housing would increase the supply of low cost houses	0.654
e) Allocation of urban and peri-urban land for the development of housing for low-income groups through public-private partnerships would encourage developers to construct more units of low cost housing	0.543
f) Provision of land for low cost residential housing development would encourage developers to construct more units of low cost housing	0.538
g) Supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water and sanitation, etc.) in areas of low cost residential housing would encourage developers to construct more units of low cost housing	0.52
h) Reviewing laws to reduce bureaucracy on housing approval processes would lower the price of houses	0.601
i) Acquiring cheap concessionary loans from cheap international financiers by property developers would lower mortgage interest rates	0.516

Statements	Factor Component
j) Attracting foreign investors to invest in low cost housing would increase the units of low cost housing	0.615

iii) Descriptive on the Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

The data below presents responses on statements regarding the housing affordability among the low income earners in Kenya.

a) Effect of developing Low Cost Housing in Areas Where Land Is Not Very expensive on the Price of Houses

Figure 4.21 indicates that 58% of the respondents strongly agreed that developing low cost housing in areas where land was not very expensive would lower the price of houses, while 21.3% agreed and 12.4% strongly disagreed. Five point three percent of the respondents were neutral and 3% disagreed.

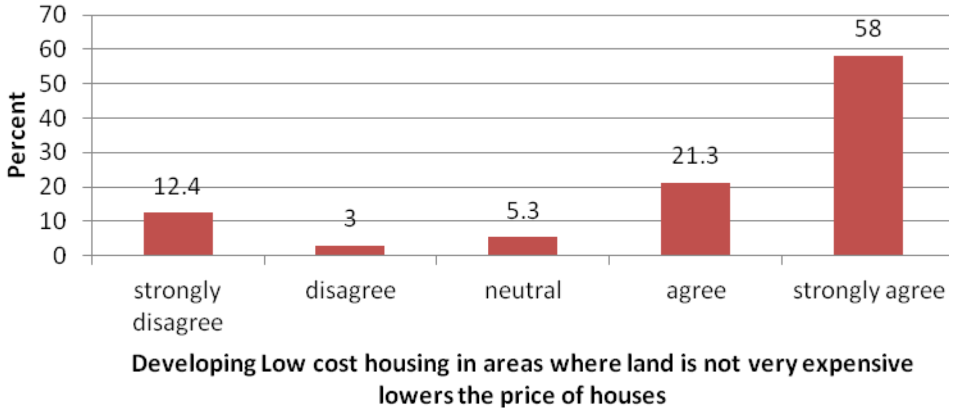

Figure 4.21: Effect of developing Low Cost Housing in Areas Where Land is Not Very expensive on the Price of Houses

The study findings agree with those of UN-Habitat (2011) which in its article titled "affordable land and housing in Africa" asserts that reasonably-priced, well-located serviced land at prices that low-income households can afford has been cited as arguably the major constraint to 'going to scale' in the production of affordable shelter.

b) Effect of Enhancement of the Planning and Management of House Building Approvals at the County Level on the Price of Houses

The respondents were asked to indicate whether enhancement of the planning and management of house building approvals at the County would lower the price of houses. Figure 4.22 shows that 40.8% of the respondents agreed and another 22.5% strongly agreed while 18.3% strongly disagreed and 13% disagreed with the statement. Only 5.3% of the respondents were neutral.

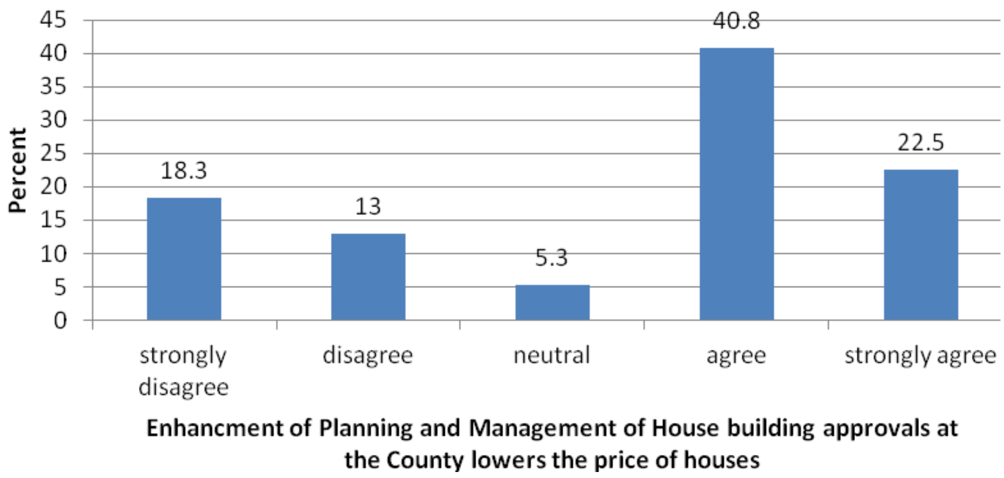

Figure 4.22: Effect of Enhancement of the Planning and Management of House Building Approvals at the County level on the Price of Houses

These findings corroborate those ones of CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that several actions would make the land transfer process quicker. They assert that streamlining the applications procedures and having a one-stop shop, a transparent and cheaper land titling and building applications process for low income earners would increase affordability of housing.

The findings are further supported by UN-Habitat (2011) which in its article titled "Affordable Land and Housing in Africa" asserts that land-use planning and development control can be made more realistic and flexible, and less complex, by revising standards and procedures and eliminating unnecessary regulations. Allowing for more flexible standards would reduce the production costs of incrementally serviced land for housing. The study findings also agree with those of Caldera and Johansson (2011) who in their paper on "The Price Responsiveness of Housing Supply in OECD Countries" argue that new housing supply depends not only national, geographical and urban characteristics but also on policies, such as land use and planning regulations.

c) Effect of Improvement of Revenue Generation Capacity of County Governments on the Supply of Low Cost Houses

The statement sought to find out whether improvement of revenue generation capacity of County Governments would increase the supply of low cost houses, 42.5% of the respondents agreed and another 20.8% strongly agreed while 17.5 % strongly disagreed and 15% disagreed with the statement. Four point one percent of the respondents were neutral (Table 4.32).

Table 4.32: Effect of Improvement of Revenue Generation Capacity of County Governments on the Supply of Low Cost Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	21	17.5	17.5
Disagree	18	15	32.5
Neutral	5	4.2	36.7
Agree	51	42.5	79.2
Strongly Agree	25	20.8	100
Total	120	100	

These findings are consistent with those ones of Kihato (2012 who in his article titled "Infrastructure and Housing Finance: Exploring the Issues in Africa" asserts that there is need to create greater capacity in local government. He argues that poorly functioning local governments that struggle with their infrastructure planning and delivery role create inadequate housing settlements in many African cities today. Greater financial capacity is required to enable them to collect sufficient own revenues and borrow where appropriate, from the market to provide capital, for new infrastructure. Further this capacity building should extend to their ability to fund recurrent and maintenance costs for this infrastructure, targeting efficient collection of rates, service charges and other consumer revenues, appropriate pricing of services as well as dealing with losses from infrastructure through leakages and theft.

d) Effect of Opening-Up New Areas within the Counties for Low Cost Housing on the Supply of Low Cost Houses

The respondents were asked whether opening-up new areas within the counties for low cost housing would increase the supply of low cost houses. Table 4.33 shows that 60% of the respondents agreed and another 20.8% strongly agreed while 8.3% disagreed and 7.5% strongly disagreed with the statements. Three point six percent of the respondents were neutral.

Table 4.33: Effect of Opening-Up New Areas within the Counties for Low Cost Housing on the Supply of Low Cost Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	9	7.5	7.5
Disagree	10	8.3	15.8
Neutral	4	3.3	19.1
Agree	72	60	79.1
Strongly Agree	25	20.8	100
Total	120	100	

The study findings also agree with those of UN-Habitat (2011) which in its article titled “Affordable Land and Housing in Africa” posits that access to adequate and affordable land and housing for all Africans can conceivably be achieved. The findings are further supported by UN-Habitat (2011) which asserts that it will require governments to shift away from short-term laissez-faire projects to systematic and long-term programmes that can increase land and housing supply and reduce costs, with a special focus on those groups who need government support the most namely the low-income households, women and vulnerable and marginalised groups.

e) Effect of Allocation of Urban And Peri-Urban Land for the Development of Low Cost Housing on the Number of Units of Low Cost Housing.

The respondents were asked to indicate whether allocation of urban and peri-urban land for the development of housing for low-income groups through public-private partnerships would encourage developers to construct more units of low cost housing. Figure 4.23 illustrates that 38.5% of the respondents agreed and another 24.9% agreed while an equal percentage of 15.4% strongly disagreed and disagreed with the statement. Five point nine percent of the respondents were neutral.

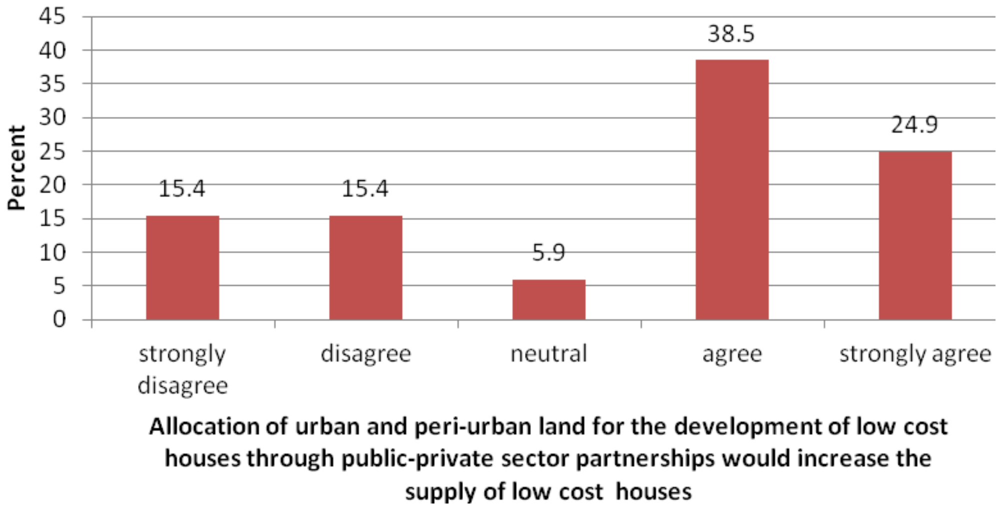

Figure 4.23: Effect of Allocation of Urban And Peri-Urban Land for the Development of Low Cost Housing Through Public-Private Partnerships on the Number of Units of Low Cost Housing.

The study findings agree with those of UN-Habitat (2013) which in its article titled "Kenya Housing Market Mapping and Value Chain Analysis" asserts that it is necessary to provide support services through collaboration so as to make houses affordable to the low income earners. They conclude that the end users have limited access to building information and less informed on matters of law related to security of tenure. They more often interact with a number of players in search of information just to transit from the need for shelter to actually occupying a complete and decent house.

This in effect makes tracing the value chain for the construction of low income end user complex, since there are many players in the housing sector with highly bureaucratic processes. There are thus a combination of obstacles faced by low income households in accessing decent housing in Kenya, that require multi-dimensional responses, necessitating institutional collaboration or partnerships. Poor infrastructure, lack of quality water, proper sanitation and drainage channels are some the challenges of low income dwellings. Further evidence in support of the findings was found by CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that the creation of strategic partnerships between private and public sector actors and the tertiary sector would increase affordability of housing.

f) Effect of provision of land for low cost residential housing development on the Number of Units of Low Cost Housing.

Regarding whether provision of land for low cost residential housing development would encourage developers to construct more units of low cost housing, 39.1% of the respondents agreed, 27.8% agreed and 14.3% disagreed as shown in Figure 4.24.Thirteen percent of the respondents disagreed and 5.3% were neutral.

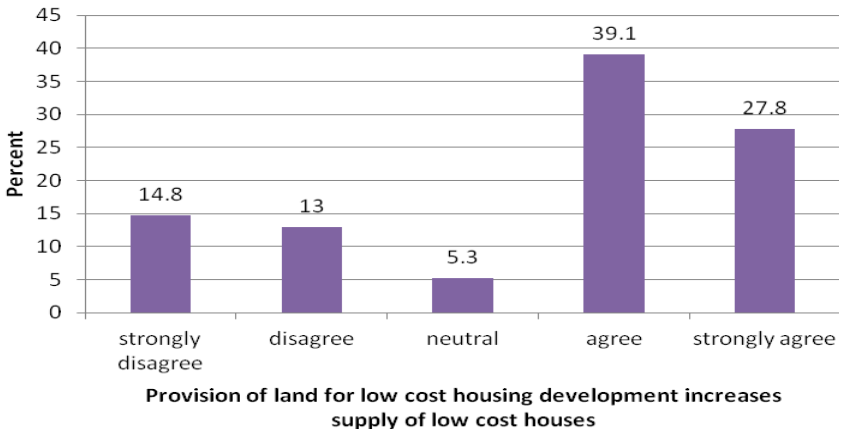

Figure 4.24: Effect of provision of land for low cost residential housing development on the Number of Units of Low Cost Housing.

The study findings concur with those of Kalema and Kayiira (2012) who in their article titled "Overview of the Housing Industry and Housing Finance Sector in Uganda" asserts that in terms of pricing, the high cost of land has significantly slowed down the provision of affordable housing. Land costs have more than doubled over the last decade. This increase in prices is partly attributed to the lack of finance available to land owners to expeditiously develop their land.

The findings are further supported by Government of Namibia (2013) which in her article titled "Summary of Blueprint on Mass Housing Development Initiative in Namibia," argues that the provision of affordable housing is hampered by poor access and non-affordability of land by the majority of the residents, especially in the urban areas. Further evidence in support of the findings was found by Thalmann (2006) who in his article titled "Triggers for Housing Development" purports that few market developers actively monitor the market for business and profit opportunities but instead respond to market triggers, such as availability of land.

g) Effect of Supply of off-Site Infrastructure and Land Servicing in Areas of Low Cost Residential Housing Number on the of Units of Low Cost Housing.

On whether supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water and sanitation, etc.) in areas of low cost residential housing would encourage developers to construct more units of low cost housing 44.1% of the respondents agreed, 20.8% strongly agreed while 17.5% strongly disagreed. A further 13.3% disagreed and 4.2% of the respondents were neutral as shown in Table 4.34 below.

Table 4.34 : Effect of Supply of off-Site Infrastructure and Land Servicing in Areas of Low Cost Residential Housing on the Number of Units Of Low Cost Housing.

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	21	17.5	17.8
Disagree	16	13.3	31.4
Neutral	5	4.2	35.5
Agree	53	44.1	79.3
Strongly Agree	25	20.8	100
Total	120	100	

The study findings agree with those of Arvanitis (2013) who in his article titled “African Housing Dynamics: Lessons from the Kenyan Market” argues that County Governments support to allow for the effective supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water & sanitation) needed to support real estate development would encourage developers to develop more housing units. The findings are further supported by CAHF (2012) which in its article titled “Housing Finance in Africa: A Review of Some of Africa’s Housing Finance Markets” argues that formal housing supply in Kenya is undermined by a number of factors, including the limited availability of serviced plots in urban centres, a problem affecting housing delivery across all income bands, but especially affecting affordability for lower income developments because of the added cost of servicing plots.

The study findings also concur with those of Okonkwo (1998) who in his paper titled "Housing Finance and Housing Delivery Systems in Kenya: Bottlenecks, Recent Developments and the Way Forward" posits that a combination of factors, including lack of serviced land has generally slowed down private investments in housing. Other similar findings were revealed by Kalema and Kayiira (2012), who in their article titled "Overview of the Housing Industry and Housing Finance Sector in Uganda", cites lack of infrastructure provision and costs associated with infrastructure as one of the barriers to housing development and affordability. They assert that the Local Government Act (1997) empowers local authorities to control development and provide urban services. However, delivery of the vast bulk of infrastructural services (access roads, water, sewerage and electricity connections) has been pioneered by developers and individual builders, to make their housing estates more attractive to end buyers. Infrastructural investments are estimated at between 15 and 25 percent of the price of the house depending on the location of the site on top of the existing infrastructure services.

These findings are inconsistent with those ones of Nordberg (2000) who in his article titled "Alleviating Poverty through Housing Development" asserts that the governments should designate special areas for informal housing development where people can build their houses over time with whatever building materials are available and affordable to them. Building sites should be offered to the urban poor with the same conditions as land in existing informal settlements, that is, without infrastructure and services. He argues that if infrastructure is provided, the urban poor cannot afford the price of land because it has to include the cost of infrastructure in order to achieve cost recovery.

In contrast with the existing informal settlements, the government-sponsored informal settlements schemes should offer security of tenure. This will stimulate investment in housing, even in areas that are not serviced with infrastructure. In exchange, people will have to build the infrastructure themselves according to plans and technical advice provided by the local authorities. The designation of informal housing areas will contribute directly to providing access to housing for the urban poor.

h) Effect of Reviewing Laws to Reduce Bureaucracy on Housing Approval Processes on the Price of Houses.

Regarding the statement that reviewing laws to reduce bureaucracy on housing approval processes would lower the price of houses, 48.5% strongly agreed, 33.1% agreed and 9.5% strongly disagreed. In addition 2.4% disagreed and 6.5% were neutral as shown in Figure 4.25.

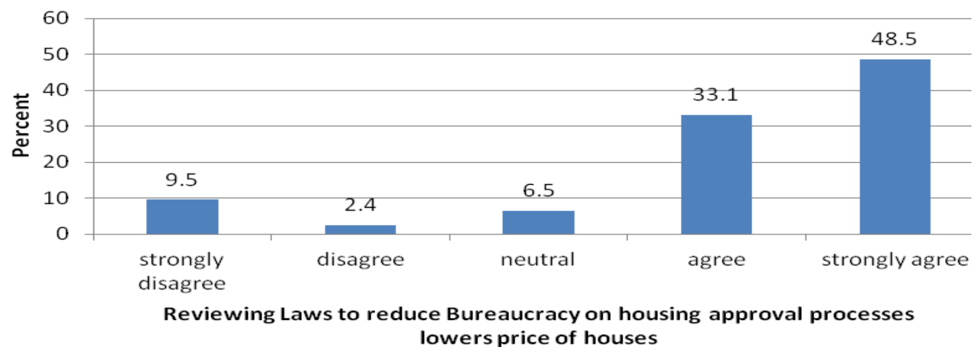

Figure 4.25: Effect of Reviewing Laws to Reduce Bureaucracy on Housing Approval Processes on the Price of Houses.

These findings corroborate those ones of CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that in order to make housing more affordable, planning and building regulations need to be less restrictive, and responsive to the needs and capacities of different groups, (e.g. reduced fees, the use of cheaper construction materials, and in determining what are statutory minimum space standards and densities).

i) Effect of Acquiring Cheap Concessionary Loans from Cheap International Financiers by Property Developers on Mortgage Interest Rates

On the statement whether acquiring cheap concessionary loans from cheap international financiers by property developers would lower mortgage interest rates, 34.2% agreed, 30% strongly agreed and 15% strongly disagreed. A further 15% disagreed and 5.8 % were neutral as illustrated on Table 4.35 below.

Table 4.35: Effect of Acquiring Cheap Concessionary Loans from Cheap International Financiers by Property Developers on Mortgage Interest Rates

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	18	15	15
Disagree	18	15	30
Neutral	7	5.8	35.8
Agree	41	34.2	70
Strongly Agree	36	30	100
Total	120	100	

Complementary findings were found by the Government of Namibia (2013) which in her article titled "Summary of Blueprint on Mass Housing Development Initiative in Namibia," argues that the option of debt financing through conventional way of borrowing local and foreign financial institutions would be pursued in an attempt to make housing more affordable.

j) Effect of Attracting Foreign Investors to Invest In Low Cost Housing on the Number of Units of Low Cost Housing.

Regarding the statement that attracting foreign investors to invest in low cost housing would increase the units of low cost housing, 55.6% of the respondents agreed, 20.1% strongly agreed while 12.4% strongly disagreed and 7.1% disagreed. A further 4.7% of the respondents were neutral as indicated on Figure 4.26.

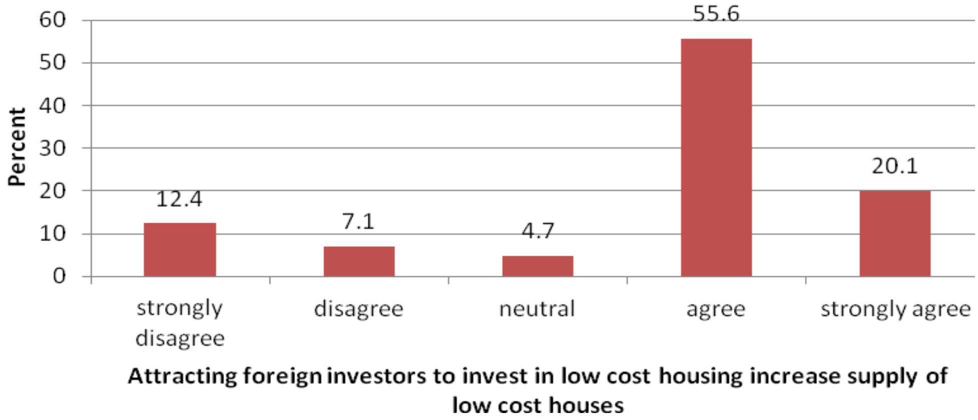

Figure 4.26 Effect of Attracting Foreign Investors to Invest In Low Cost Housing on the Number Of Units of Low Cost Housing.

The descriptive statistics findings above are summarized in Table 4.36. The mean score of responses regarding the effects of the role of the County Governments on housing affordability among the low income earners in Kenya are as follow: 29.3% strongly agreed, 40.9% agreed while 5.1% were neutral, 10.6% disagreed and 14.1% strongly disagreed.

Table 4.36: County Governments and Housing Affordability

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
a)Developing low cost housing in areas where land is not very expensive would lower the price of houses	12.4%	3.0%	5.3%	21.3%	58.0%	4.09
b)Enhancement of the planning and management of house building approvals at the County level would lower the price of houses	18.3%	13.0%	5.3%	40.8%	22.5%	3.36
c)Improvement of revenue generation capacity of County Governments would increase the	17.5%	15%	4.2%	42.5%	20.8%	3.34

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
supply of low cost houses						
d) Opening-up new areas within the counties for low cost housing would increase the supply of low cost houses	7.5%	8.3%	3.3%	60%	20.8%	3.77
e) Allocation of urban and peri-urban land for the development of housing for low-income groups through public-private partnerships would encourage developers to construct more units of low cost housing	15.4%	15.4%	5.9%	38.5%	24.9%	3.42
f) Provision of land for low cost residential housing development would encourage developers to construct more units of low cost housing	14.8%	13.0%	5.3%	39.1%	27.8%	3.52
g)Supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water and sanitation, etc.) in areas of low cost residential housing would encourage developers to construct more units of low cost housing	17.5%	13.3%	4.2%	44.1%	20.8%	3.36
h)Reviewing laws to reduce bureaucracy on housing approval processes would lower the price of low cost houses	9.5%	2.4%	6.5%	33.1%	48.5%	4.09
i)Acquiring cheap concessionary loans from cheap international financiers by property developers	15%	15%	5.8%	34.2%	30%	3.48

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
would lower mortgage interest rates						
j) Attracting foreign investors to invest in low cost housing would increase the units of low cost housing	12.4%	7.1%	4.7%	55.6%	20.1%	3.64
AVERAGE	**14.1%**	**10.6%**	**5.1%**	**40.9%**	**29.3%**	**3.61**

iv) Pearson Correlation Coefficient between Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners

Correlation between variables is a measure of how well the variables are related. The most common measure of correlation in statistics is the Pearson Correlation (technically called the Pearson Product Moment Correlation or PPMC), which shows the linear relationship between two variables. Results are between -1 and 1. A result of -1 means that there is a perfect negative correlation between the two values at all, while a result of 1 means that there is a perfect positive correlation between the two variables. Result of 0 means that there is no correlation between the two variables (Gujarat, 2004). The Pearson correlation results from this study are shown in Table 4.37 and it reveals that there is a 0.512 positive correlation between the effects of the role of the County Governments housing policy and housing affordability among low income earners.

Table 4.37: Pearson Correlation Coefficient between the Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners

Variable		Housing Affordability	County Govt
Housing Affordability	Pearson Correlation	1	0.512
	Sig. (2-tailed)		0.000
County Govt	Pearson Correlation	0.512	1
	Sig. (2-tailed)	0.000	

v) Linear Regression between Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners

In this section, the research hypothesis was tested and results presented. Reference is made to the conceptual framework in Figure 2.1 and the proposed hypothesis (H_{02}). On account of the scatter plots shown in Figure 4.27, the study assumed a linear relationship between the effects of the role of County Governments housing policy and housing affordability among the low income earners in Kenya. A look at the scatter plot suggests a positive linear relationship between the effects of the role of the County Governments housing policy as the only independent variable and housing affordability. The ordinary least square (OLS) method of estimation was adopted in examining the relationship between the predictors and the dependent variable. OLS allowed for derivation of a regression line of best fit while keeping the errors at minimum.

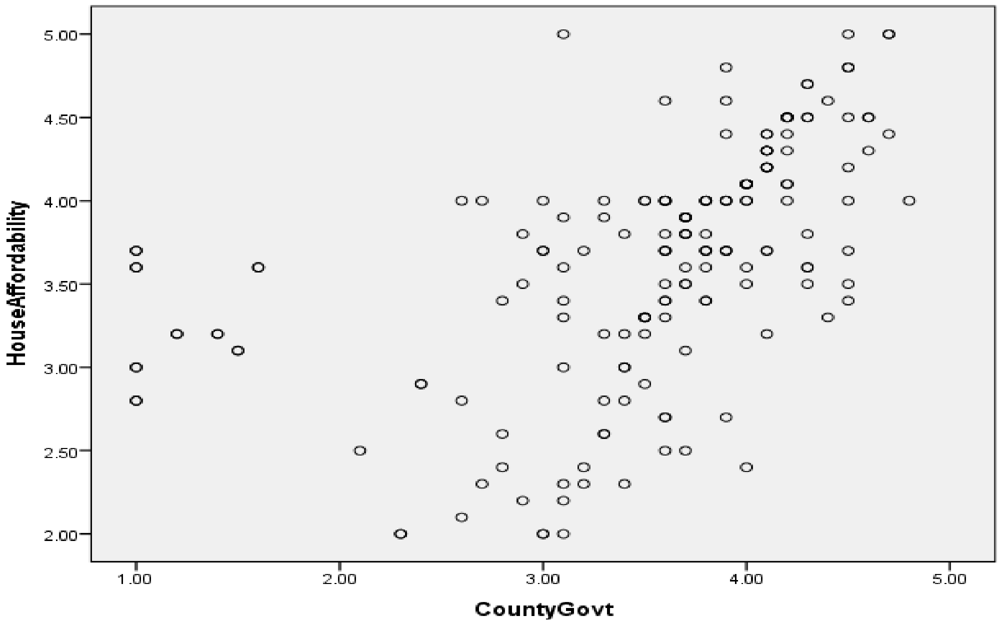

Figure 4.27: Scatter Plots of Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners

Regression analysis was conducted to empirically determine whether the effects of the role of the County Governments housing policy were a significant determinant of housing affordability among the low income earners. Regression results in Table 4.38 indicate the goodness of fit for the regression between County Governments and housing affordability is satisfactory. An R squared of 0.263 indicates that 26.3% of the variances in the housing affordability among the low income earners are explained by the variances in the effects of the role played by the County Governments housing policy.

Table 4.38: Model Summary for the Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Indicator	Coefficient
R	0.512
R Square	0.263
Std. Error of the Estimate	0.60801

The model significance for the effects of the role of County Governments housing policy is presented in Table 4.39. An F statistic of 63.011 indicated that the model for the effects of the role of the County Governments housing policy as the only independent variable is significant. This is supported by a probability value of 0.000. The reported probability (0.000) is less than the conventional probability of 0.05. The model applied with the effects of the role of the County Governments housing policy as the only independent variable can significantly predict the change in the housing affordability among the low income earners in Kenya. The study, therefore, fails to accept the null hypothesis, H_{02} at 95% confidence interval and concludes that there is a significant relationship between the effects of the role of the County Governments housing policy and housing affordability among the low income earners in Kenya.

Table 4.39: ANOVA for Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	23.294	1	23.294	63.011	0.000
Residual	65.433	119	0.37		
Total	88.727	120			

The effects of the role of the County Governments housing policy coefficients are presented in Table 4.40. The results show that the effects of the role of the County Governments housing policy as the only independent variable contributes significantly to the model since the p-value is 0.000. This implies that the effects of the role of the County Governments housing policy as the only independent variable is statistically significant in explaining housing affordability among the low income earners in Kenya.

Table 4.40: Coefficients of the Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Variable	Beta	Std. Error	t	Sig.
Constant	2.216	0.183	12.082	0.000
County Govt	0.405	0.051	7.938	0.000

LIHA = 2.216 + 0.405 COU GOV + μ

vi) Normality Test for Effects of the Role of the County Governments Housing Policy on Housing Affordability among the Low Income Earners

Figure 4.28 below shows the normality test for the effects of the role of the County Governments housing policy which indicates that the dependent variable was normally distributed and that the probability of outliers was minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

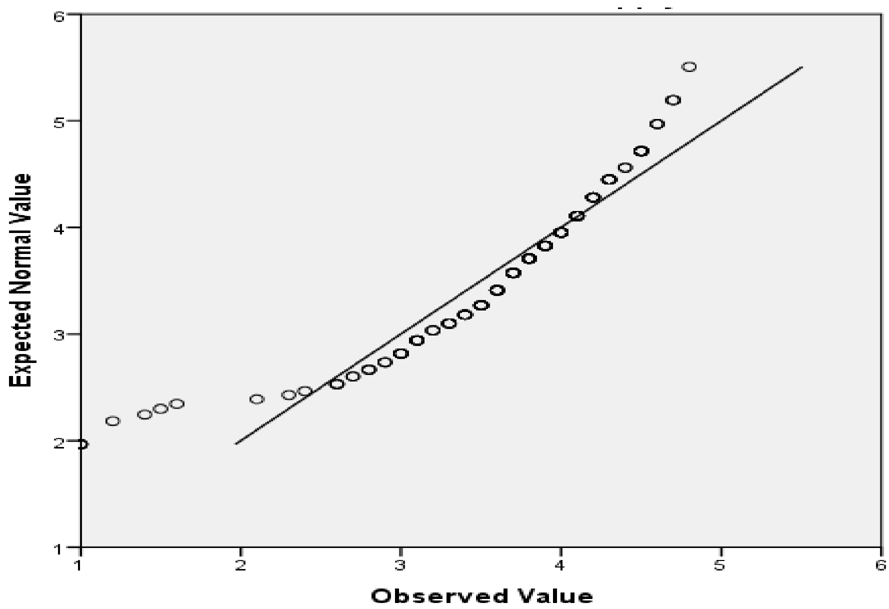

Figure 4.28: Normality Plot of Effects of the Role of the County Governments Housing Policy on housing affordability among the Low Income Earners

4.4.4 Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

i) Reliability Test

Using Cronbach"s Coefficient Alpha test on the effects of mortgage distribution channels, a coefficient of 0.831 was found as shown in Table 4.41. These results corroborates findings by Sekaran (2003), Saunders Lewis and Thornhill (2009) and Christensen, Johnson and Turner (2011) who stated that scales of 0.7 and above, indicate satisfactory reliability. Based on these recommendations, the statements under the effects of mortgage distribution channels variable of this study were concluded to have adequate internal consistency, therefore, reliable for the analysis and generalization on the population.

Table 4.41: Reliability Test on Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

Description	Indicator
Cronbach's Alpha	0.831
No of Items	12

ii) Factor Analysis

Factor Analysis was carried out to describe variability among the observed variables and check for any correlated variables with the aim of reducing data that was found redundant. Conventionally, statements scoring more than 30% which is the minimum requirement for inclusion of variables into the final model (Hair et al., 2010; Kothari, 2004) were included. Table 4.42 indicates that all the twelve statements attracted a coefficient of more than 0.3 (30%) hence were retained for further analysis.

Table 4.42: Factor Analysis on Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

Statements	Factor Component
a)Increase in competition among the mortgage lending channels would lower mortgage rate of interest	0.752
b)Establishment of a mortgage liquidity facility would lower mortgage interest rates	0.817
c)Appropriate management of risks of lending to lower income groups would reduce mortgage interest rates	0.678
d)Mortgage lenders capacity building to strengthen mortgage underwriting would increase the amount of mortgage loans lent	0.794
e)Provision of incremental housing mortgages would increase the affordability of houses to the low income earners	0.63
f)Asking for low initial mortgage down payment would increase the period of mortgage repayments	0.482
g)Micro-finance approach of incremental housing finance tends to increase the period of mortgage repayments	0.373
h)Offering guarantees to mortgage lenders lending for purchase of low cost houses by the government would reduce mortgage interest rates	0.537
i)Facilitating NGO's operating in the housing sector would increase supply of low cost houses	0.413
j)Reducing fees charged on mortgages would reduce the amounts of initial down payments on mortgages	0.485
k)Micro lending by housing micro finance organizations would lower the amounts of the regular mortgage payments	0.573
l)National housing corporation assigning a given proportion of their annual budget for low cost housing would increase supply of low cost houses	0.425

iii) Descriptive on Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

a) Effect of Increased Competition among Mortgage Lenders on Mortgage Rate of Interest

Figure 4.29 shows that majority (66.9%) of the respondents agreed that increase in competition among the mortgage lending channels would lower mortgage rate of interest. In addition 18.3% of the respondents disagreed while 10.1% strongly disagreed and 4.7% of the respondents were neutral.

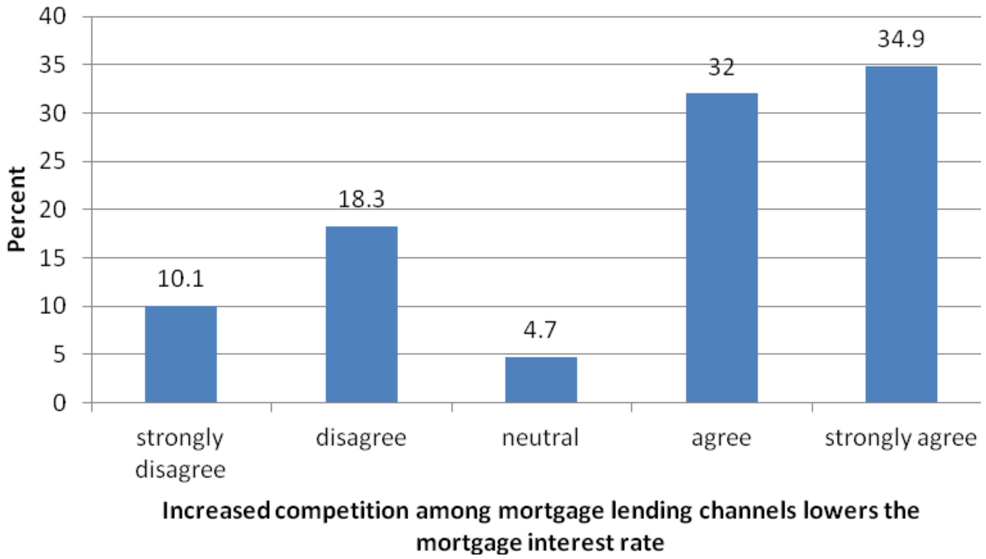

Figure 4.29: Effect of Increased Competition among Mortgage Lenders on Mortgage Rate of Interest

The study findings concur with those of Gual (1999) who in his paper titled "Financial Structure and the Interest Rate Channel of ECB Monetary Policy", tests for the impact of banking competition on the transmission process related to euro area bank lending rates and finds that higher competition tends to put pressure on banks to adjust lending rates quicker when money market rates are decreasing. Also, higher competition tends to reduce the ability of banks to increase lending rates when money market rates are moving up.

Allen (2011) supports these findings in his paper titled "Competition in the Canadian Mortgage Market" where he asserts that as competition in the housing finance market became more intense in the past few years, notably with the entry of new competitors, the Canadian consumers benefited from increasing choice in terms of rate and term options and payment features for their mortgage loans. These findings are also supported by Allen, Clark, and Houde (2011) who in their article titled "Discounting in Mortgage in Canada" argue that the positive correlation between mortgage rates and branch concentration strongly suggests that mortgage rates are higher in less competitive markets.

b) Effect of Establishment of a Mortgage Liquidity Facility on Mortgage Rate of Interest

Regarding the statement whether establishment of a mortgage liquidity facility would lower mortgage interest rates, 33.3% agreed, 31.6% strongly agreed while 15% strongly disagreed and 14.2% disagreed. A further 5.8% of the respondents were neutral (Table 4.43).

Table 4.43: Effect of Establishment of a Mortgage Liquidity Facility on Mortgage Rate of Interest

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	18	15	15
Disagree	17	14.2	29.2
Neutral	7	5.8	35
Agree	40	33.3	68.3
Strongly Agree	38	31.6	100
Total	120	100	

Similar results have been reported by World Bank (2011) which in its article titled "Developing Kenya's Mortgage Market" argues that developing a mortgage liquidity facility would provide lenders with lower cost funding. They asserts that in turn, this enables lenders to improve interest rates offered thus improving end user affordability and therefore concludes that policy objectives such as the promotion of affordable housing can be supported by the liquidity facility.

c) Effect of Appropriate Management of Risks of Lending to Lower Income Groups on Mortgage Rate of Interest

On the statement whether appropriate management of risks of lending to lower income groups would reduce mortgage interest rates, 34.3% of the respondents strongly agreed, 16.6% agreed, 20.7% strongly disagreed and 18.3% disagreed (Figure 4.30).

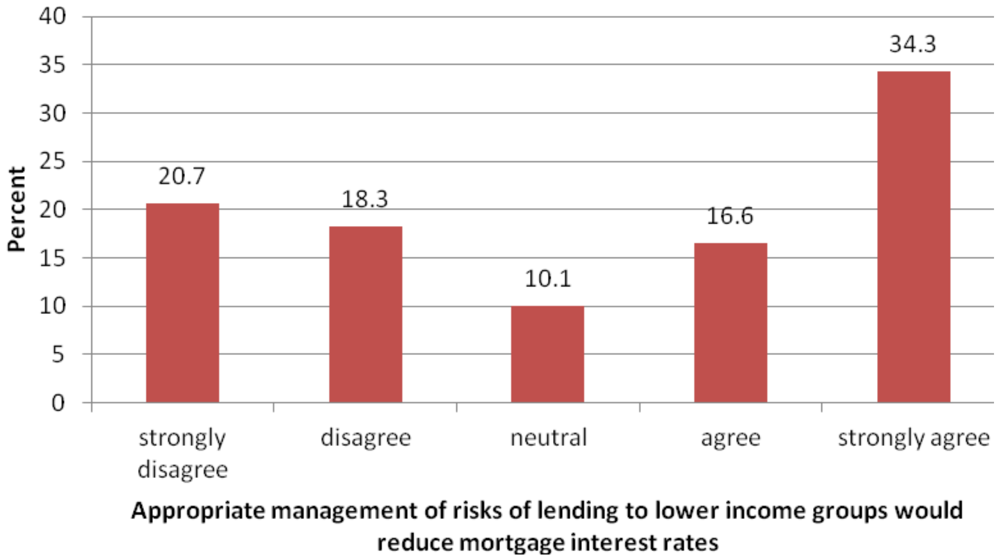

Figure 4.30: Effect of Appropriate Management of Risks of Lending to Lower Income Groups on Mortgage Rate of Interest

The study findings agree with those of CAHF (2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that the expansion of support services such as credit ratings and insurance products for credit life, health insurance policies to help reduce the cost/risk of especially long term credit to lower income groups. This they argue would increase the affordability of housing.

d) Effect of Mortgage Lenders Capacity Building to Strengthen Mortgage Underwriting on the Amount of Mortgage Loans Lent

Majority (63.3%) of the respondents agreed that mortgage lenders capacity building to strengthen mortgage underwriting would increase the amount of mortgage loans lent (Figure 4.31).

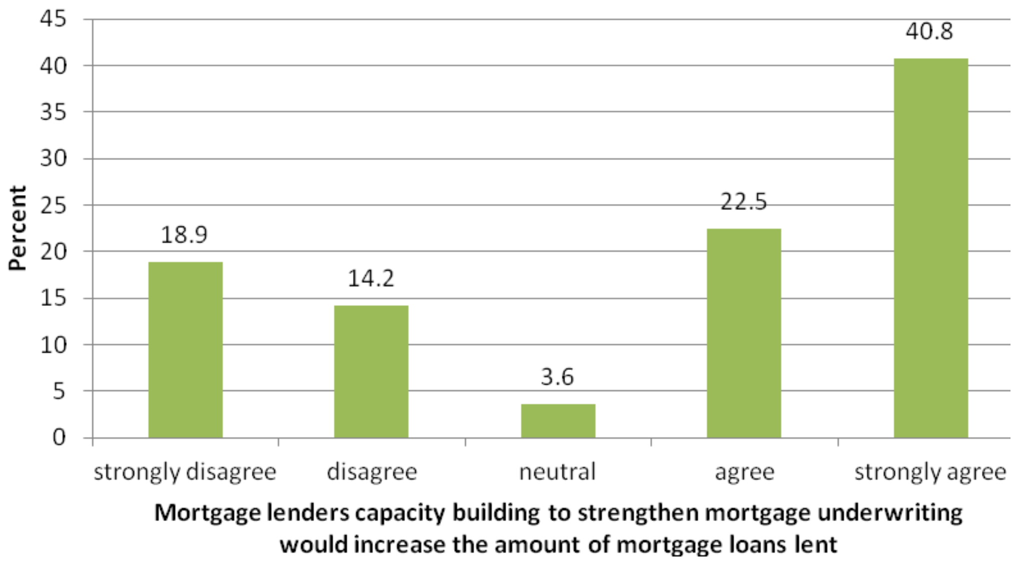

Figure 4.31: Effect of Mortgage Lenders Capacity Building to Strengthen Mortgage Underwriting on the Amount of Mortgage Loans Lent

Similar findings were shown in a study by Arvanitis (2013) who in his article titled "African Housing Dynamics: Lessons from the Kenyan Market" argues that capacity building should be undertaken to enhance the capacity of lenders and indicates that this should also include microfinance providers with tailored products for the housing sector, in particular given the role that such institutions can have with regards to home improvements loans. A key challenge is the banking of those in the informal sector. This would enable the lenders to appropriately assess the risk of borrowers and would increase the increase the amount of mortgage loans lent to the borrowers. He asserts that local bank capacity building to strengthen mortgage underwriting skills would help improve Kenya's mortgage market.

e) Effect of Provision of Incremental Housing Mortgages on Affordability of Houses to the Low Income Earners

Table 4.44 shows that 30.8% of the respondents agreed and 29.2% strongly agreed that provision of incremental housing mortgages would increase affordability of houses to the low income earners. A further 16.7% disagreed while 10 % strongly disagreed and 13.3% were neutral.

Table 4.44: Effect of Provision of Incremental Housing Mortgages on Affordability of Houses to the Low Income Earners

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	12	10	10
Disagree	20	16.7	26.7
Neutral	16	13.3	40
Agree	37	30.8	70.8
Strongly Agree	35	29.2	100
Total	120	100	

These findings corroborate those ones of UN-Habitat (2013), which in its article titled "Kenya Housing Market Mapping and Value Chain Analysis" asserts that the developers in Kenya today offer completed housing units which does not necessarily resolve the problem of housing the poor, but rather concentrates the right to housing to the landlords. They argue that housing microfinance focuses on enabling more low income persons to become homeowners rather than being tenants through incremental building. Hence HMF is more likely to support a greater numbers of low income persons to meet their housing goals than mortgages for completed units.

The study findings also concur with those of Diouf (2013) who in his article titled "State of Housing Microfinance in Africa" argues that the overwhelming numbers of home buyers in Africa are from the informal sector and do not qualify for formal mortgages. Housing Micro Finance is the only option for most Africa potential home buyers.

f) Effect of Low Initial Mortgage down Payment on the Period of Mortgage Repayments

Regarding the statement whether asking for low initial mortgage down payment would increase the period of the regular mortgage repayments, 39.1% of the respondents agreed, 33.7% strongly agreed while 13% disagreed and 11.2% were neutral (Figure 4.32).

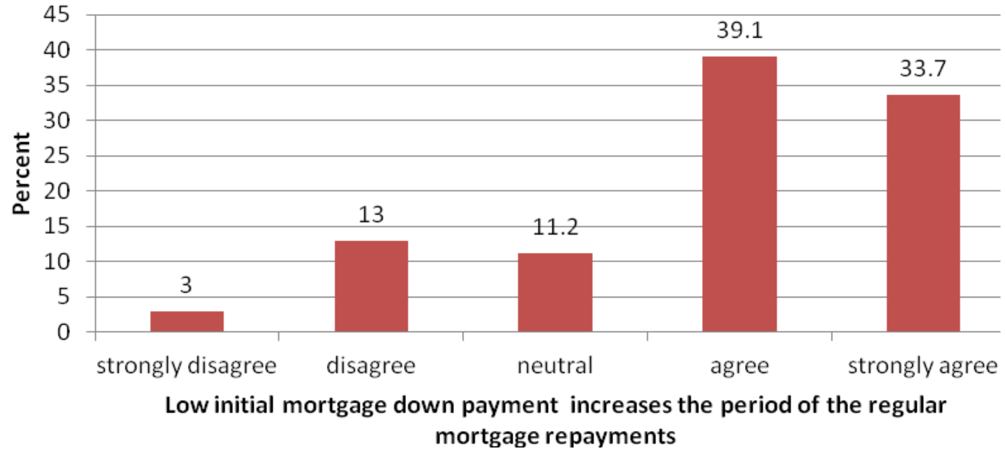

Figure 4.32: Effect of Low Initial Mortgage down Payment on the Period of Mortgage Repayments

g) Effect of Micro-finance Approach of incremental Housing Finance on the Period of Mortgage Repayments

Figure 4.33 shows that 55% of the respondents strongly agreed and 30.2% agreed while 6.5% disagreed and 5.9% of the respondents were neutral that micro-finance approach of incremental housing finance tends to increase the period of mortgage repayments.

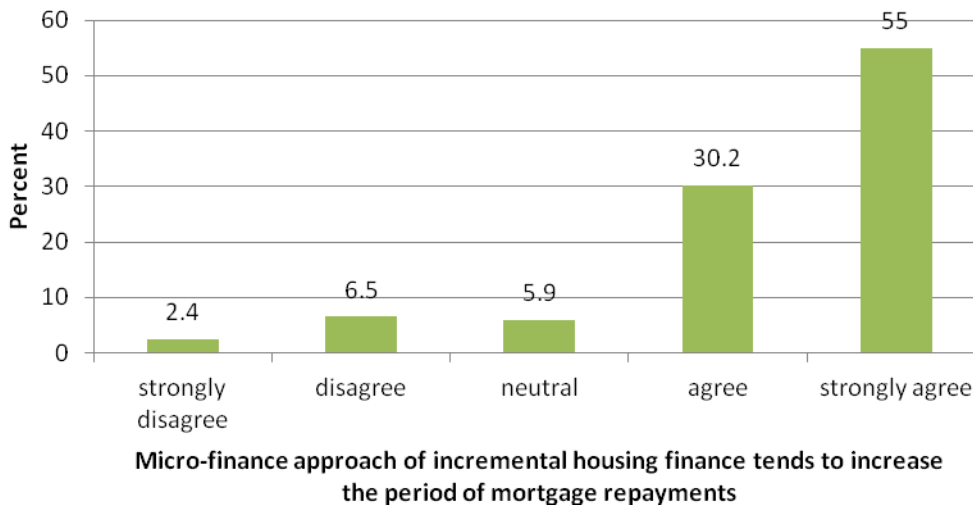

Figure 4.33: Effect of Micro-finance Approach of Incremental Housing Finance on the Period of Mortgage Repayments

The study findings concur with those of UN-Habitat (2013) which in its article titled "Kenya Housing Market Mapping and Value Chain Analysis" argues that incremental or progressive building is done over a time period. The elements of time and progressive steps or stages characteristic in incremental building are critical components to the design of housing microfinance products. Savings products, like loan products, can be appropriately designed and delivered along the path to a complete house.

The study findings are further supported by UN-Habitat (2011) which in its article titled "Affordable Land and Housing in Africa" argues that in many African countries, innovations in housing microfinance and community funds are improving access to housing finance. They argue that the growing use of the latter is an especially significant trend that should inform housing policy and strategy formulation. Greater recognition and support should be given to community-based initiatives such as daily-savings schemes and the federations of the urban poor that have evolved from these. Housing finance systems that support the progressive building approach of poor households can make housing finance more affordable.

h) Effect of Offering Government Guarantees to Mortgage Lenders on Mortgage Rate of Interest

The respondents were asked to indicate whether offering guarantees to mortgage lenders lending for purchase of low cost houses by the government would reduce mortgage interest rates. Majority (79.3%) of the respondents agreed, 10.7% disagreed, 5.9% were neutral and 4.1% of the respondents strongly disagreed with the statement (Figure 4.34).

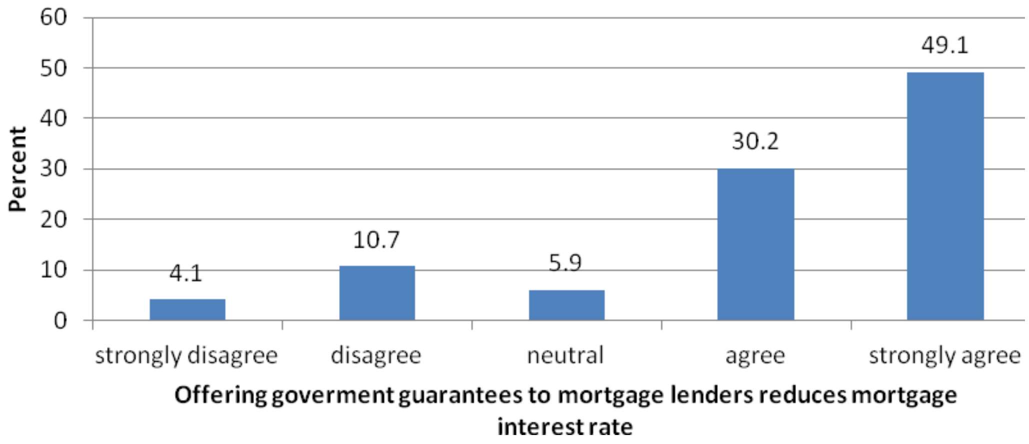

Figure 4.34: Effect of Offering Government Guarantees to Mortgage Lenders on Mortgage Rate of Interest

These findings corroborate those ones of McVitty, (2012) who in his article titled "Addressing the Housing Finance Gap in Tunisia" indicated that in Morocco there has been a partnership between banks and the government which make lending more accessible through the Fogarim program. Fogarim is a mortgage guarantee fund for households with small and irregular income. Key features of Fogarim are to guarantee 70% of a loan that a bank makes to a household with informal income. McVitty, (2012) indicates that the effect of the government guarantee is to lower the interest rates. The borrowers end up being charged a low rate of interest, often around 6%, compared to 3-4% for high-income borrowers who already have collateral which the banks would otherwise not allow (McVitty, 2012).

i) Effect of Facilitating NGO's operating in the Housing Sector on Supply of Low Cost Houses

A majority (72.5%) of the respondents agreed and strongly agreed that facilitating NGO's operating in the housing sector would increase supply of low cost houses. In addition 11.7% of the respondents were neutral while 8.3% disagreed and 7.5% strongly disagreed with the statement (Table 4.45).

Table 4.45: Effect of Facilitating NGO's operating in the Housing Sector on Supply of Low Cost Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	9	7.5	7.5
Disagree	10	8.3	15.8
Neutral	14	11.7	27.5
Agree	46	38.3	65.8
Strongly Agree	41	34.2	100
Total	120	100	

The study findings concur with those of CAHF (2012) which in its article titled "Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets" argues that NGOs also play an important role in housing delivery, often with the support of international bodies. To support this assertion, they cite examples of Homeless International which is working with the Pamoja Trust to enable more than 4,000 households obtain land and/or secure tenure, 172 households upgrade their homes, and in partnership with the World Bank, relocate 20,000 railway dwelling families to sustainable accommodation.

They also cite Shelter Afrique who entered into a Ksh40 million loan agreement with micro lender Makao Mashinani to deliver housing microfinance to about 2, 000 households and Jamii Bora Makao which initiated its second phase of a Ksh5 billion low cost housing project that will deliver 2,200 houses. The first phase of 950 houses has been completed and low cost, two bedroom units are being sold for Ksh1.5 million.

j) Effect of Reduction of Fees Charged on Mortgages on the Amounts of Initial Down Payments on Mortgages

Regarding the statement whether reducing fees charged on mortgages would reduce the amounts of initial down payments on mortgages, 29.2% of the respondents strongly agreed, 35% agreed, 15% disagreed, 10.8% strongly disagreed and 10% were neutral as shown on Table 4.46.

Table 4.46: Effect of Reduction of Fees Charged on Mortgages on the Amounts of Initial Down Payments on Mortgages

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	13	10.8	10.8
Disagree	18	15	25.8
Neutral	12	10	35.8
Agree	42	35	70.8
Strongly Agree	35	29.2	100
Total	120	100	

k) Effect of Micro Lending by Housing Micro Finance Organizations on the Amounts Regular Mortgage Payments

The respondents were asked to indicate whether micro lending by housing micro finance organizations would lower the amounts of the regular mortgage payments. A majority (70.4%) of the respondents agreed and strongly agreed, 11.8% strongly disagreed, 10.1% were neutral and 7.7% disagreed as indicated in Figure 4.35.

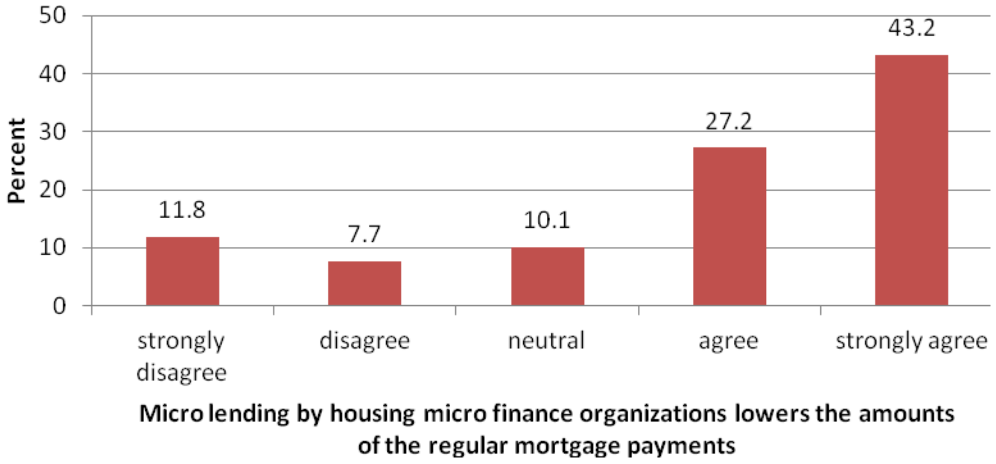

Figure 4.35: Effect of Micro Lending by Housing Micro Finance Organizations on the Amounts Regular Mortgage Payments

These findings are consistent with those ones of CAHF (2012) which in its article titled "Housing Finance in Africa – A Review of Some of African's Housing Finance Markets," argues that most low income households engage in "incremental housing", whereby they keep on saving and slowly build their own house over time either room by room, or element by element. As a consequence, consumer loans for home construction are more prevalent than loans for home acquisition, in particular for lower income earners. Such loans are often times smaller in size (thus easier to repay) as they often used to contribute to incremental housing schemes. In view of the limited reach of formal housing finance, microfinance loans for home improvements are increasingly seen as the way forward to increase home ownership.

l) Effect of assigning a portion of NHC's Annual Budget to Low Cost Housing on Supply of Low Cost Houses

Figure 4.36 indicates that 72.2% of the respondents agreed and strongly agreed that by National Housing Corporation assigning a given proportion of their annual budget for the supply of low cost houses would increase the supply of low cost houses. A further 10.7% strongly disagreed and another 10.7% disagreed with the statement.

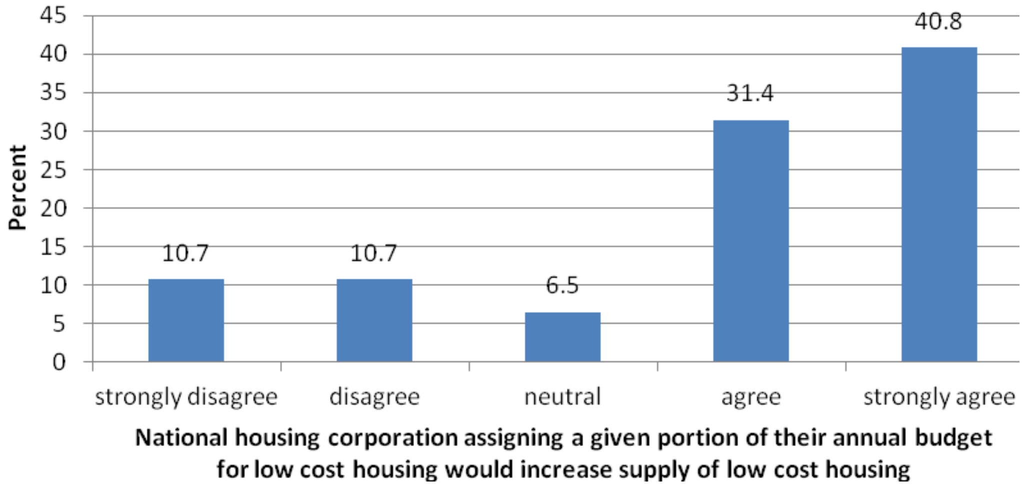

Figure 4.36: Effect of assigning a portion of NHC's Annual Budget to Low Cost Housing on Supply of Low Cost Houses

The descriptive statistics findings above are summarized in Table 4.47. The mean score of responses regarding the effects of the role of mortgage distribution channels on housing affordability among the low income earners in Kenya are as follow: 38% strongly agreed, 30.4% agreed while 8.3% were neutral, 12.8% disagreed and 10.5% strongly disagreed.

Table 4.47: Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among the Low Income Earners

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
a)Increase in competition among the mortgage lenders would lower mortgage rate of interest	10.1%	18.3%	4.7%	32.0%	34.9%	3.63
b)Establishment of a mortgage liquidity facility would lower mortgage interest rates	15%	14.2%	5.8%	33.3%	31.6%	3.51
c)Appropriate management of risks of lending would reduce mortgage interest rates	20.7%	18.3%	10.1%	16.6%	34.3%	3.25
d)Mortgage lenders capacity building	18.9%	14.2%	3.6%	22.5%	40.8%	3.52

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
would increase the amount of mortgage loans lent						
e)Provision of incremental housing mortgages would increase the affordability of houses to the low income earners	10%	16.7%	13.3%	30.8%	29.2%	3.52
f)Asking for low initial mortgage down payment would increase the period of mortgage repayments	3.0%	13.0%	11.2%	39.1%	33.7%	3.88
g)Micro-finance approach of incremental housing finance tends to increase the period of mortgage repayments	2.4%	6.5%	5.9%	30.2%	55.0%	4.29
h)Offering guarantees to mortgage lenders would reduce mortgage interest rates	4.1%	10.7%	5.9%	30.2%	49.1%	4.09
i)Facilitating NGO's in the housing sector would increase supply of low cost houses	7.5%	8.3%	11.7%	38.3%	34.2%	3.83
j)Reducing fees charged on mortgages would reduce the amounts of initial down payments on mortgages	10.8%	15%	10%	35%	29.2%	3.56
k)Micro lending by housing micro finance organizations would lower the amounts of the regular mortgage payments	11.8%	7.7%	10.1%	27.2%	43.2%	3.82
l)National housing corporation assigning a given proportion of their annual budget for low cost housing would increase supply of low cost houses	10.7%	10.7%	6.5%	31.4%	40.8%	3.81
AVERAGE	**10.5%**	**12.8%**	**8.3%**	**30.4%**	**38.0%**	**3.73**

The study findings agree with those of United Nations (2005) which asserted that there is no universally applicable model of a housing finance system. Every national housing finance system is a result of specific circumstances, such as the macroeconomic conditions, banking regulations, the size of the banking system, taxation, subsidy programmes and the structure of the housing market. These factors shape the path between bank-based and capital market-based mortgage loan delivery channels.

The findings are further supported by Gual (1999) who did a test for the impact of banking competition on the transmission process related to Euro area bank lending rates and found that higher competition tends to put pressure on banks to adjust lending rates quicker when money market rates are decreasing. Also, higher competition tends to reduce the ability of banks to increase lending rates when money market rates are moving up. These findings are also consistent with those of De Bondt (2005) who in his paper titled “Retail Bank Interest Rate Pass-through: New Evidence at the Euro Area Level” also argued that stronger competition from other banks and from capital markets has helped to speed up the Euro area banks’ interest rate adjustments to changes in market rates.

Complementary findings were also found by Allen, Clark and Houde (2011) who in their paper “Discounting; in Mortgage Markets” posited that the positive correlation between mortgage rates and branch concentration strongly suggests that mortgage rates are higher in less-competitive markets. Allen (2011) also asserted that as competition in the housing finance market became more intense in the past few years, notably with the entry of new competitors, the Canadian consumers benefited from increasing choice in terms of rate and term options and payment features for their mortgage loans.

Further evidence in support of the findings was found by Bennet, Peach and Peristiani (1998) who in their paper titled “Structural Change in the Mortgage Market and the Propensity to refinance” alluded to the increasing efficiencies of the mortgage lending market, in large part attributable to such technological factors as the increasing presence of the internet.

iv) Pearson Correlation Coefficient between Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among Low Income Earners

Correlation between variables is a measure of how well the variables are related. The most common measure of correlation in statistics is the Pearson Correlation (technically called the Pearson Product Moment Correlation or PPMC), which shows the linear relationship between two variables. Results are between -1 and 1. A result of -1 means that there is a perfect negative correlation between the two values at all, while a result of 1 means that there is a perfect positive correlation between the two variables. Result of 0 means that there is no correlation between the two variables (Gujarat, 2004). The Pearson correlation results from this study are shown in Table 4.48 and it reveals that there is a 0.524 positive correlation between the effects of the role of mortgage distribution channels and housing affordability among low income earners.

Table 4.48: Pearson Correlation Coefficient between Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among Low Income Earners

Variable		**Housing Affordability**	**Mortgage Distribution Channels**
Housing Affordability	Pearson Correlation	1	0.524
	Sig. (2-tailed)		0.000
Mortgage Distribution Channels	Pearson Correlation	0.524	1
	Sig. (2-tailed)	0.000	

v) Linear Regression between Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among Low Income Earners

In this section, the research hypothesis was tested and results presented. Reference was made to the conceptual framework in Figure 2.1 and the proposed hypothesis (*H03*). On account of the scatter plots shown in Figure 4.37, the study assumed a linear relationship between the effects of the mortgage distribution channels and housing affordability among the low income earners in Kenya. A look at the scatter plot suggests a positive linear relationship between the effects of the mortgage distribution channels and housing affordability. The ordinary least square (OLS) method of estimation was adopted in examining the relationship between the predictors and the dependent variable. OLS allowed for derivation of a regression line of best fit while keeping the errors at minimum.

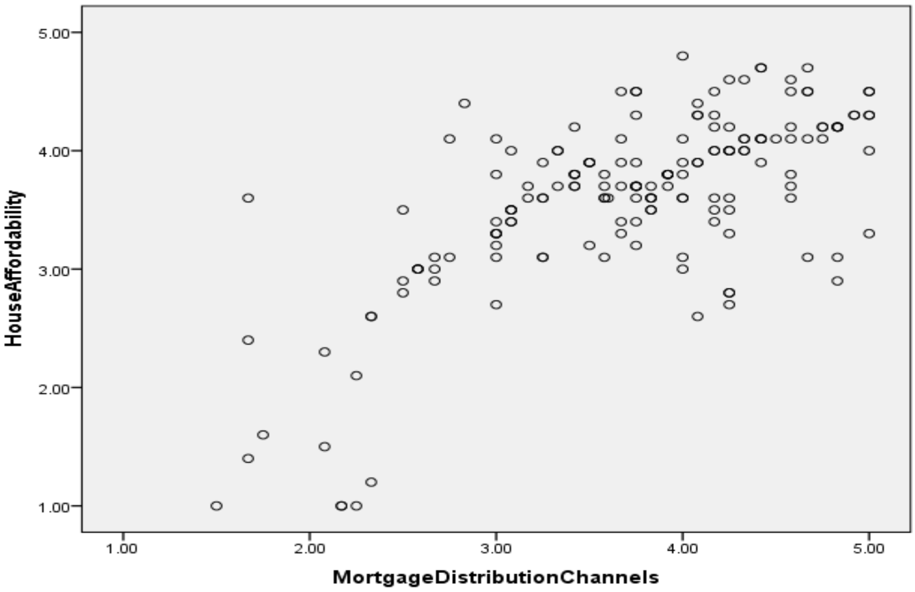

Figure 4.37: Scatter Plots of Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among Low Income Earners

Regression analysis was conducted to empirically determine whether the effects of the role of mortgage distribution channels were a significant determinant of housing affordability among the low income earners in Kenya. Regression results in Table

4.49 indicate the goodness of fit for the regression between the effects of mortgage distribution channels and housing affordability is satisfactory. An R squared of 0.275 indicates that 27.5% of the variances in the housing affordability among the low income earners in Kenya are explained by the variances in the effects of the roles played by the mortgage distribution channels.

Table 4.49: Model Summary for Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among Low Income Earners

Indicator	Coefficient
R	0.524
R Square	0.275
Std. Error of the Estimate	0.60291

The model significance is presented in table 4.50. An F statistic of 67.091 indicated that the model is significant. This is supported by a probability value of 0.000. The reported probability (0.000) is less than the conventional probability (0.05). The model applied can significantly predict the change in the housing affordability among the low income earners in Kenya. The study, therefore, fails to accept the null hypothesis, H_{03} at 95% confidence interval and concludes that there is a significant relationship between the effects of the role of mortgage distribution channels and housing affordability among the low income earners in Kenya.

Table 4.50: ANOVA for Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among Low Income Earners

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	24.387	1	24.387	67.091	0.000
Residual	64.339	119	0.363		
Total	88.727	120			

The mortgage distribution channels coefficients are presented in Table 4.51. The results show that mortgage distribution channels contribute significantly to the model since the p-value is 0.000. This implies that the effects of mortgage distribution channels are statistically significant in explaining housing affordability among the low income earners in Kenya.

Table 4.51: Coefficients of Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among Low Income Earners

Variable	Beta	Std. Error	t	Sig.
Constant	2.12	0.189	11.199	0.000
Mortgage Distribution Channels	0.417	0.051	8.191	0.000

LIHA = 2.12+ 0.417 MDC+ μ

vi) Normality Test on Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among Low Income Earners

Figure 4.38 below shows the normality test of the effects of mortgage distribution channels which indicates that the dependent variable is normally distributed and that the probability of outliers is minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

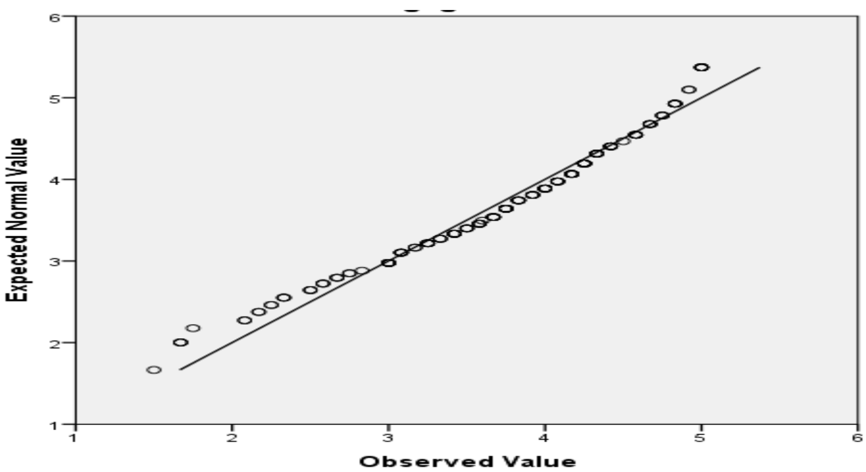

Figure 4.38: Normality Plot on Effects of the Role of the Mortgage Distribution Channels on Housing Affordability among Low Income Earners

4.4.5 Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

i) Reliability Test

Using Cronbach‟s Coefficient Alpha test on the effects of the role of property developers, a coefficient of 0.709 was found as shown in Table 4.52. These results corroborates findings by Sekaran (2003), Saunders Lewis and Thornhill (2007) and Christensen, Johnson and Turner (2011) who stated that scales of 0.7 and above, indicate satisfactory reliability. Based on these recommendations, the statements under the effects of the role of property developers' variable of this study were concluded to have adequate internal consistency, therefore, reliable for the analysis and generalization on the population.

Table 4.52: Reliability Test on Effects of the Role of the Property Developers on housing affordability among Low Income Earners

Description	Indicator
Cronbach's Alpha	0.709
No of Items	10

ii) Factor Analysis

Factor Analysis was carried out to describe variability among the observed variables and check for any correlated variables with the aim of reducing data that was found redundant. Conventionally, statements scoring more than 30% which is the minimum requirement for inclusion of variables into the final model (Hair et al., 2010; Kothari, 2004) were included. Table 4.53 indicates that all the ten statements attracted a coefficient of more than 0.3 (30%) hence were retained for further analysis.

Table 4.53: Factor Analysis on Effects of the Role of the of Property Developers on Housing Affordability among Low Income Earners

Statements	Factor Component
a)Technical assistance to increase the capacity of property developers to deliver housing units in larger quantities would lower the price of houses	0.464
b)Raising money through sale of housing bonds by property developers would increase the period of mortgage repayments	0.349
c)Acquiring cheap concessionary loans from cheap international financiers by property developers would increase the supply of low cost houses	0.428
d)Adopting cheap building technologies would increase the supply of low cost houses	0.606
e)Property developers relying more on equity provision and limiting excessive debt would lower the price of houses	0.390
f)Developing low income housing in areas where land is not very expensive would increase the supply of low cost houses	0.459
g)Joint ventures models between property developers and land owners would lower the prices of houses	0.541
h)Making it mandatory for every developer to commit a proportion of their housing development say like 30 % to low cost housing would make developers to construct more units of low cost houses	0.642
i)Encouraging land-buying companies to convert into property developers would increase the supply of low cost houses	0.724
j)Competition among property developers would lower the prices of houses	0.579

iii) Descriptive Statistics on Effects of the Role of the Property Developers on housing affordability among Low Income Earners

a) Effect of Technical Assistance to Increase the Capacity of Property Developers on the Price of Houses

Regarding the statement that technical assistance to increase the capacity of property developers to deliver housing units in larger quantities would lower the price of houses, 48.5% of the respondents strongly agreed, 29.6% agreed while 10.1% disagreed and 6.5% of the respondents were neutral as shown in Figure 4.39.

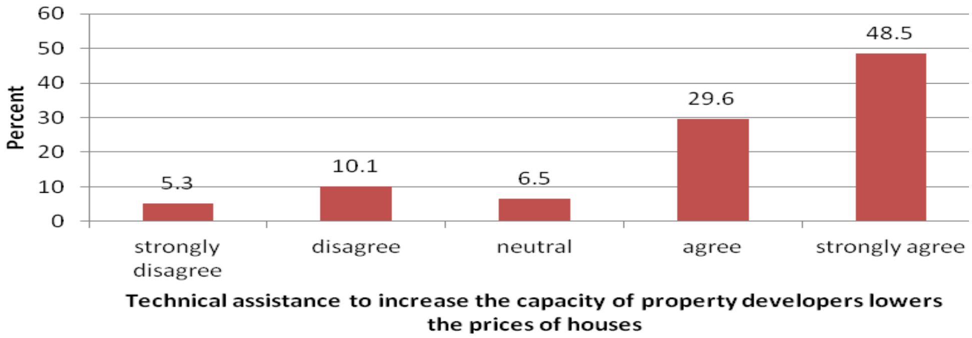

Figure 4.39: Effect of Technical Assistance to Increase the Capacity of Property Developers on the Price of Houses

These findings corroborate those ones of Arvanitis (2013) who in his paper titled "African Housing Dynamics: Lessons from the Kenyan Market" posits that building developers' capacity is paramount for the development of the formal housing sector. He asserts that on the one hand, it will allow them to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale and on the other hand, it will allow them to build better houses, and in safer conditions.

b) Effect of Raising Money through Sale of Long Term Housing Bonds by Property Developers on the Period of Mortgage Repayments

A majority (74%) of the respondents agreed and strongly agreed that raising money through sale of housing bonds by property developers would increase the period of mortgage repayments, 11.8% disagreed while 5.3% strongly disagreed and 8.9% of the respondents were neutral as shown in Figure 4.40.

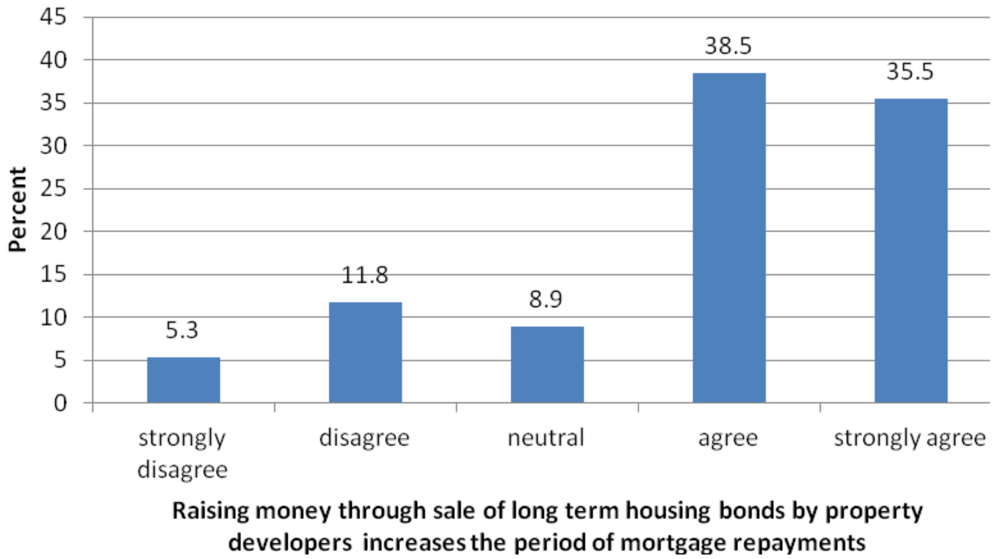

Figure 4.40: Effect of Raising Money through Sale of Long Term Housing Bonds by Property Developers on the Period of Mortgage Repayments

c) Effect of Acquiring Cheap Concessionary Loans from Cheap International Financiers on the supply of Low Cost Houses.

Figure 4.35 shows that 76.9% of the respondents agreed and strongly agreed that acquiring cheap concessionary loans from cheap international financiers by property developers would increase the supply of low cost houses. A further 8.9% of the respondents disagreed while 6.5% strongly disagreed and 7.7% of the respondents were neutral as illustrated on Figure 4.41.

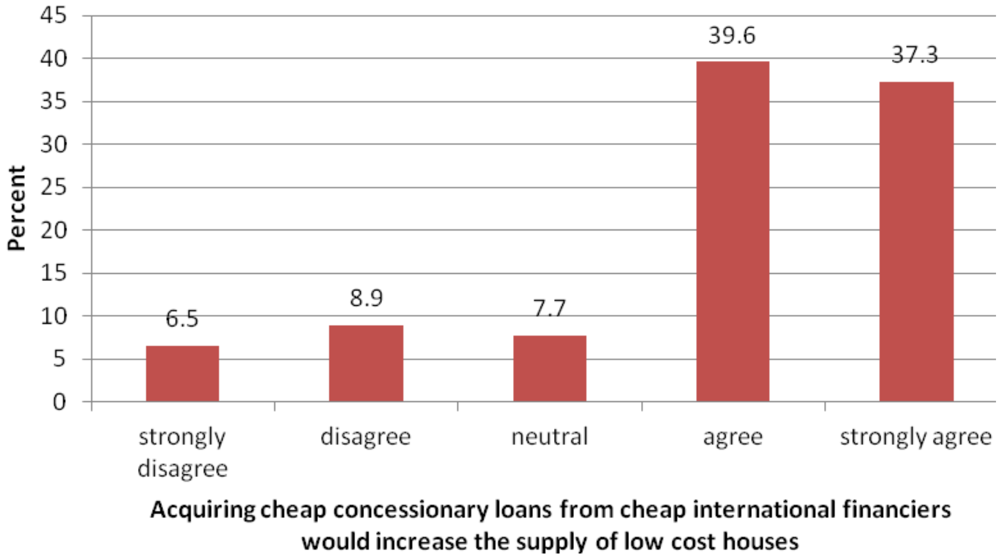

Figure 4.41: Effect of Acquiring Cheap Concessionary Loans from Cheap International Financiers on the supply of Low Cost Houses.

These findings are consistent with those ones of Dijkgraaf (2000) who in his article titled "Private Building Sector in Disarray in Indonesia and Thailand, Its Consequences for Social Housing: Lessons to Be Learned" asserts that globalization makes easy access to cheap foreign capital possible. This would lower costs for the developers and enable them build more houses.

The study findings also agree with those of Ball (1996) in his paper "Investing in New Housing: Lessons for the Future" who suggests that the trigger of development activity is an analysis of market opportunities by developers who see demand for new housing, anticipate adequate return on investment, gear their resources towards purchase of land and housing production and then sell these housing units with a view to maximizing profits. Availability of cheap concessionary loans would help reduce the costs for developers and enable them make an adequate return on their investments which would increase the supply of houses.

d) Effect of Adoption of Cheap Building Technologies on the Supply Low Cost of Houses

The respondents were asked to indicate whether adopting cheap building technologies would increase the supply of houses, 39.1% agreed, 34.9% strongly agreed, 12.4% disagreed while 5.9% strongly disagreed and 7.7% of the respondents were neutral as shown in Figure 4.42.

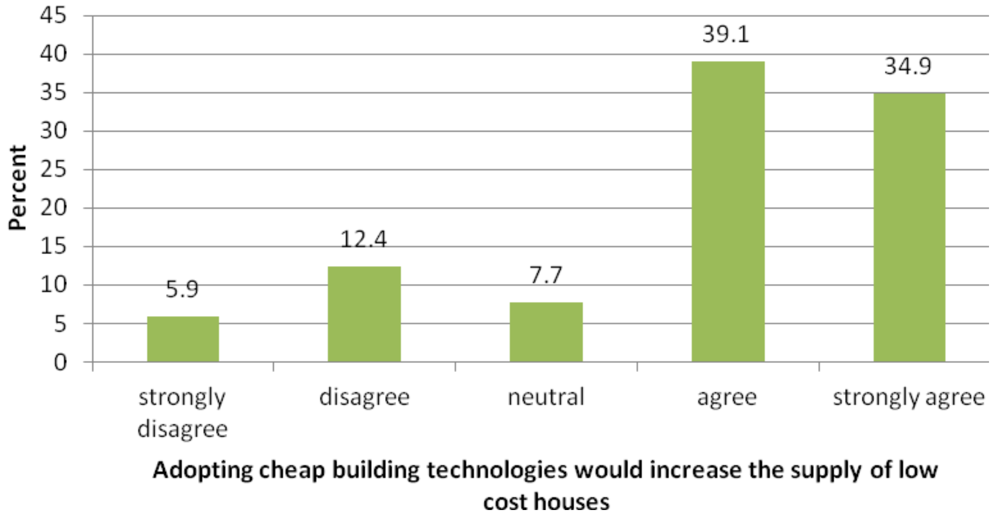

Figure 4.42: Effect of Adoption of Cheap Building Technologies on the Supply of Low Cost Houses

These findings are consistent with those ones of Nordberg (2000) in his article titled "Alleviating Poverty through Housing Development" where he asserts that in many countries, building regulations and codes prohibit the use of the only building materials the poor can afford: mud-bricks, compressed earth blocks, hand-made roofing tiles, or soil-cement flooring. As the urban poor cannot afford to buy officially recognized building materials, they are obliged to build in informal areas where the building code is not enforced. However, as there are no standards for locally produced building materials, banks do not provide loans for houses built with local materials. Revision of building codes and establishment of technical norms and standards for local building materials will contribute indirectly to poverty alleviation through increased low-cost housing construction and employment.

e) Effect of Property Developers Relying More on Equity Provision and Limiting Excessive Debt on the Price of Houses

Regarding the statement that property developers relying more on equity provision and limiting excessive debt would lower the price of houses, 42.5% of the respondents agreed, 41.7% strongly agreed and 9.2% disagreed. Results are presented on Table 4.54 below.

Table 4.54: Effect of Property Developers Relying More on Equity Provision and Limiting Excessive Debt on the Price of Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	4	3.3	3.3
Disagree	11	9.2	12.5
Neutral	4	3.3	15.8
Agree	51	42.5	58.3
Strongly Agree	50	41.7	100
Total	120	100	

The study findings concur with those of Arvanitis (2013) who in his article titled "African Housing Dynamics: Lessons from the Kenyan Market" argues that equity provision for developers will limit excessive debt leveraging of real estate developments. Private equity funds can be an interesting avenue to be pursued. He argues that this would make it possible for property developers reduce the costs of finance.

f) Effect of Developing Low Income Housing in Areas Where Land Is Not Very Expensive On the Supply of Low Cost Houses

Table 4.55 shows that 37.5% of the respondents strongly agreed that developing low income housing in areas where land is not very expensive would increase the supply of low cost houses. A further 23.3% of the respondents agreed, 15% disagreed and 15.8% strongly disagreed with the statement.

Table 4.55: Effect of Developing Low Income Housing in Areas Where Land Is Not Very Expensive On the Supply of Low Cost Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	19	15.8	15.8
Disagree	18	15	30.8
Neutral	10	8.3	39.1
Agree	28	23.3	62.4
Strongly Agree	45	37.5	100
Total	120	100	

These findings are consistent with those ones of UN-Habitat (2011) which in its article titled "Affordable Land and Housing in Africa" asserts that the availability of land at affordable prices is fundamental to expanding the supply of affordable housing and limiting the growth of new slums. The location of the land is key for access to infrastructure, services, amenities and employment opportunities. Ensuring that land used for housing is in environmentally sound locations is also vital to the environmental sustainability of housing and the health of occupants.

g) Effect of Having Joint Ventures Models between Property Developers and Land Owners on the Prices of Houses

On the statement whether joint ventures models between property developers and land owners would lower the prices of houses, 43.8% of the respondents strongly agreed, 24.3% agreed and 16% strongly disagreed. Furthermore, 10.7% of the respondents were neutral and 5.3% disagreed (Figure 4.43).

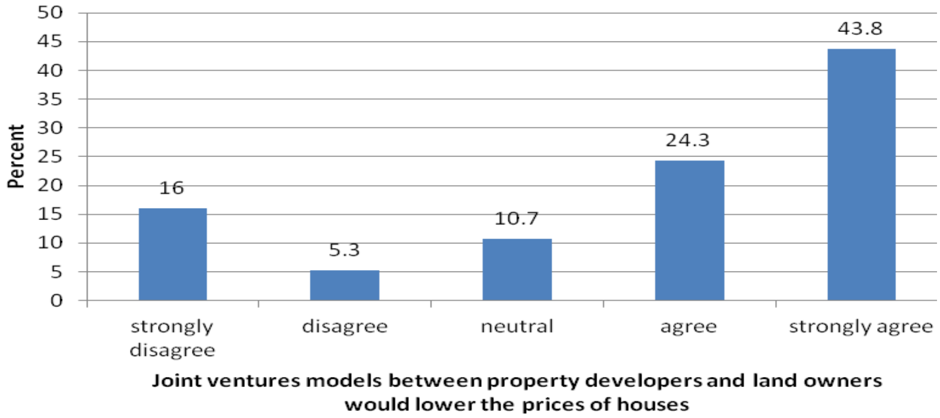

Figure 4.43: Effect of Having Joint Ventures Models between Property Developers and Land Owners on the Prices of Houses

These findings corroborate those ones of Golland (1996) who in his journal article titled "Housing Supply, Profit and Housing Production: The Case of the United Kingdom, Netherlands and Germany" posits that profitability in housing is based on various variables which includes land prices. Having joint ventures models between property developers and land owners would mitigate against the high land prices and would therefore lower the price of houses.

h) Effect of Making it Mandatory for Every Developer to Commit a Proportion of Their Housing on Low Cost Housing on the Number Units of Low Cost Houses.

Figure 4.44 shows that 65.7% of the respondents agreed and strongly agreed that making it mandatory for every developer to commit a proportion of their housing development say like 30 % to low cost housing would make developers to construct more units of low cost houses.

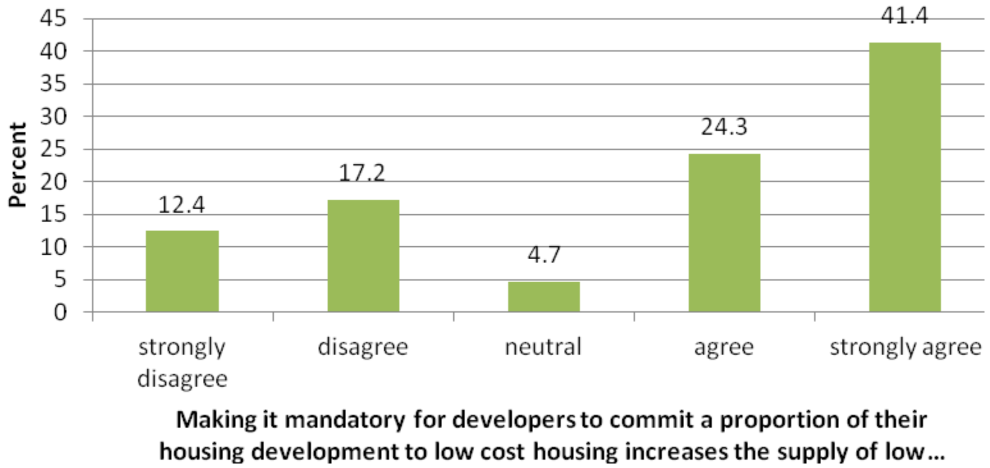

Figure 4.44: Effect of Making it Mandatory for Every Developer to Commit a Proportion of Their Housing on Low Cost Housing on the Number Units of Low Cost Houses.

These findings corroborate those ones of Aziz (2007) who in his article titled "Low-Cost Housing Policy in Malaysia: The Challenge of Delivery" asserts that in Malaysia, the government has made low-cost housing a mandatory section of housing development abided by housing developers who have to provide 30% of their total housing development for low-cost housing. The policy is imposed through administrative procedures that force developers to provide a portion of development for low-cost housing in order to gain development approval by local authorities (Aziz, 2007; REHDA, 2008).This has added to the units of low cost housing in Malaysia.

The findings are further supported by CAHF(2013) which in its article titled "Scoping Study: Overview of the Housing Finance Sector in Zambia" states that including the requirement that all future private housing projects include a percentage of housing for lower income groups would increase the supply of low cost housing.

i) Effect of Encouraging Land-Buying Companies to convert Into Property Developers on the Supply of Low Cost Houses

A majority (72.5%) of the respondents agreed and strongly agreed that encouraging land-buying companies to convert into property developers would increase the supply of low cost houses. However, 13.3% and 11.6% disagreed and strongly disagreed with the statement. Table 4.56 presents the study findings.

Table 4.56: Effect of Encouraging Land-Buying Companies to convert Into Property Developers on the Supply of Low Cost Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	14	11.6	11.6
Disagree	16	13.3	24.9
Neutral	3	2.5	27.4
Agree	20	16.7	44.1
Strongly Agree	67	55.8	100
Total	120	100	

j) Effect of Competition among Property Developers on the Price of Houses

Regarding the statement that competition among property developers would lower the prices of houses, 48.3% of the respondents strongly agreed, 19.2% agreed and 14.2% disagreed as shown on Table 4.57.

Table 4.57: Effect of Competition among Property Developers on the Price of Houses

Likert Scale	Frequency	Percent	Cumulative Percent
Strongly Disagree	16	13.3	13.3
Disagree	17	14.2	27.5
Neutral	6	5	32.5
Agree	23	19.2	51.7
Strongly Agree	58	48.3	100
Total	120	100	

The study findings corroborate with those of Chaplain et al. (2012) who asserts that competition tends to lower the price of goods and services to the benefit of the consumer. They assert that the Australian mortgage market is characterized by a high level of competition, contracting lending margins, a very low level of loans in arrears, product innovation and the level and rate of refinancing remains high.

The descriptive statistics findings above are summarized in Table 4.58. The mean score of responses regarding the effects of the role of property developers on housing affordability among the low income earners in Kenya are as follow: 42.5% strongly agreed, 29.6% agreed while 6.4% were neutral, 11.9% disagreed and 9.5% strongly disagreed.

Table 4.58: Effects of the Role of the Property Developers and Housing Affordability among Low Income Earners

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
a)Technical assistance to increase the capacity of property developers to deliver houses in larger quantities would lower the price of low cost houses	5.3%	10.1%	6.5%	29.6%	48.5%	4.06
b)Raising money through sale of	5.3%	11.8%	8.9%	38.5%	35.5%	3.87

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
long term bonds by property developers would increase the period of mortgage repayments						
c)Acquiring cheap concessionary loans from cheap international financiers by property developers would increase the supply of low cost houses	6.5%	8.9%	7.7%	39.6%	37.3%	3.92
d)Adopting cheap building technologies would increase the supply of low cost houses	5.9%	12.4%	7.7%	39.1%	34.9%	3.85
e)Property developers relying more on equity provision and limiting excessive debt would lower the price of houses	3.3%	9.2%	3.3%	42.5%	41.7%	4.12
f)Developing low income housing in areas where land is not expensive would increase the supply of low cost houses	15.8%	15%	8.3%	23.3%	37.5%	3.51
g)Joint ventures models between property developers and land owners would lower the prices of houses	16.0%	5.3%	10.7%	24.3%	43.8%	3.75
h)Making it mandatory for every developer to commit a proportion of their housing, say like 30 % to low cost housing would make them construct more units of low cost houses	12.4%	17.2%	4.7%	24.3%	41.4%	3.65
i)land-buying companies converting into property developers would increase the supply of low	11.6%	13.3%	2.5%	16.7%	55.8%	3.89

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
cost houses						
j)Competition among property developers would lower the prices of houses	13.3%	14.2%	5%	19.2%	48.3%	3.75
Average	**9.5%**	**11.9%**	**6.4%**	**29.6 %**	**42.5%**	**3.84**

The study findings agree with those in Arvanitis (2013) who posited that building developers' capacity is paramount for the development of the formal housing sector. He asserts that on one hand, it will allow them to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale and on the other hand, it will allow them to build better houses, and in safer conditions. In a survey of developers, Thalmann (2006) in his article titled "Triggers for Housing Development" purports that few market developers actively monitor the market for business and profit opportunities but instead respond to market triggers, such as availability of land.

The research findings also confirm the findings of Otiso, (2003) who asserts that the private sector is capable of providing living needs to large segments of the urban community if they operate within a well-conceived competitive environment where there is a possibility of charging consumers and making a profit, absence of daunting obstacles such as technology and scale of investment and the presence of competent governments with the capacity to enforce standards, contract fulfillment and service provision. Okonkwo (1998) further confirms the study findings by positing that a combination of factors, including high costs of construction, lack of serviced land and high interest rates, has generally slowed down private investments in housing.

The study findings corroborate with those of Caldera and Johansson (2011) who argued that new housing supply depends on national, geographical and urban characteristics but also on policies, such as land use and planning regulations. They argued that affordability of housing is affected by the way in which housing supply markets respond to changes in prices either through increased construction or raising prices. In supply-constrained markets, most adjustment occurs in higher prices rather than expanding housing supply (Gyourko, 2009). In the short to medium term supply-constrained/high-demand markets result in higher prices. Greater supply and low demand result in lower prices. Unresponsive housing markets cause price volatility including demand shocks that affect residential investment resulting in economic instability.

iv) Pearson Correlation Coefficient between Effects of the Role of the Property Developers and Housing Affordability among Low Income Earners

Correlation between variables is a measure of how well the variables are related. The most common measure of correlation in statistics is the Pearson Correlation (technically called the Pearson Product Moment Correlation or PPMC), which shows the linear relationship between two variables. Results are between -1 and 1. A result of -1 means that there is a perfect negative correlation between the two values at all, while a result of 1 means that there is a perfect positive correlation between the two variables. Result of 0 means that there is no correlation between the two variables (Gujarat, 2004). The Pearson correlation results from this study are shown in Table 4.59 and it reveals that there is a 0.454 positive correlation between the effects of the role of property developers and housing affordability among low income earners.

Table 4.59: Pearson Correlation Coefficient between Effects of the Role of the Property Developers and Housing Affordability among Low Income Earners

Variable		**Housing Affordability**	**Property Developers**
Housing Affordability	Pearson Correlation	1	0.454
	Sig. (2-tailed)		0.000
Property Developers	Pearson Correlation	0.454	1
	Sig. (2-tailed)	0.000	

v) Linear Regression between Effects of the Role of the Property Developers and Housing Affordability among Low Income Earners

In this section, the research hypothesis was tested and results presented. Reference was made to the conceptual framework in Figure 2.1 and the proposed hypothesis (*H_{04}*). On account of the scatter plots shown in Figure 4.45, the study assumed a linear relationship between the effects of the role of property developers and housing affordability among the low income earners in Kenya. A look at the scatter plot suggests a positive linear relationship between the effects of the role of property developers and housing affordability among the low income earners in Kenya. The ordinary least square (OLS) method of estimation was adopted in examining the relationship between the predictors and the dependent variable. OLS allowed for derivation of a regression line of best fit while keeping the errors at minimum.

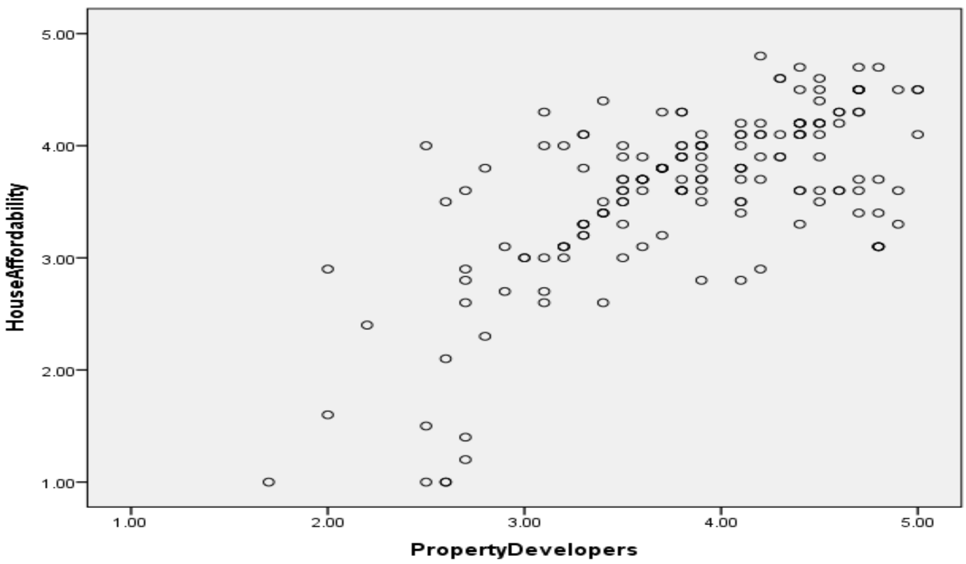

Figure 4.45: Scatter Plots on Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

Regression analysis was conducted to empirically determine whether the effects of the role of property developers were a significant determinant of housing affordability among the low income earners. Regression results in Table 4.60 indicate the goodness of fit for the regression between the effects of the role of property developers and housing affordability among the low income earners in Kenya is satisfactory. An R squared of 0.206 indicates that 20.6% of the variances in the housing affordability among the low income earners in Kenya are explained by the variances in the roles played by the effects of the role of property developers.

Table 4.60: Model Summary for Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

Indicator	Coefficient
R	0.454
R Square	0.206
Std. Error of the Estimate	0.63094

The model significance is presented in Table 4.61. An F statistic of 45.881 indicated that the model is significant. This is supported by a probability value of 0.000. The reported probability (0.000) is less than the conventional probability (0.05). The model applied can significantly predict the change in the housing affordability among the low income earners in Kenya. The study, therefore, fails to accept the null hypothesis, H_{04} at 95% confidence interval and concludes that there is a significant relationship between the effects of the role of property developers and housing affordability among the low income earners in Kenya.

Table 4.61: ANOVA for Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.265	1	18.265	45.881	0.000
Residual	70.462	119	0.398		
Total	88.727	120			

The effects of the role of property developers' coefficients are presented in Table 4.62. The results show that the effects of the role of property developers contribute significantly to the model since the p-value is 0.000. This implies that the effects of the role of property developers are statistically significant in explaining housing affordability among the low income earners in Kenya.

Table 4.62: Coefficients of Effects of the Role of the property developers on Housing Affordability among Low Income Earners

Variable	Beta	Std. Error	t	Sig.
Constant	2.049	0.238	8.627	0.000
Property Developers	0.42	0.062	6.774	0.000

LIHA = 2.049+ 0.42 PD + μ

vi) Normality Test for Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

Figure 4.46 below shows the normality test of the effects of the role of property developers which indicates that the dependent variable was normally distributed and that the probability of outliers was minimal. The findings imply that the responses were lying close to the line of normality. Furthermore, it implied that the data was ideal for all type of analysis, including parametric and regression analysis.

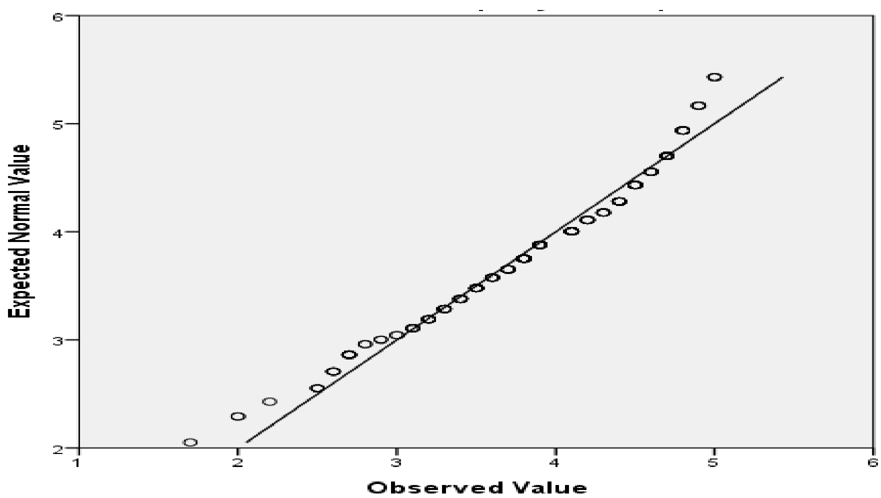

Figure 4.46: Normality Plot of Effects of the Role of the Property Developers on Housing Affordability among Low Income Earners

4.5 Overall Multiple Regression

A multiple regression analysis was conducted to investigate the joint causal relationship between the independent variables and dependent variable. Regression results in Table 4.63 indicated that the goodness of fit for the regression of independent variables and low income housing affordability in Kenya is satisfactory.

Table 4.63: Model Fit for Low Income Housing Affordability among Low Income Earners

Indicator	Coefficient
R	0.690
R Square	0.477
Std. Error of the Estimate	0.51952

An R squared of 0.477 indicated that (47.7%) of the variances in low income housing affordability in Kenya are explained by the variances in the effects of supply side institutional roles on housing affordability among the low income earners in Kenya.

Table 4.64: **ANOVA for Low Income Housing Affordability among Low Income Earners**

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	42.303	6	7.051	26.122	0.000
Residual	46.423	114	0.27		
Total	88.727	120			

ANOVA results are presented in Table 4.64. The results indicated that the overall model was significant, that is, the independent variables were good joint explanatory variables/determinants for low income housing affordability (F=26.122, P value =0.000).

Table 4.65: Model Summary and Parameter Estimates for Low Income Housing Affordability among Low Income Earners

Variable	Beta	Std. Error	t	Sig.
Constant	-0.34	0.23	-1.479	0.141
National Govt	0.249	0.093	2.69	0.008
County Govt	-0.139	0.086	-1.614	0.108
Mortgage Distribution Channels	0.152	0.076	1.997	0.048
Property Developers	0.16	0.074	2.176	0.031

The regression equation is as follows;

$$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

Where

Y = Low income housing affordability in Kenya (dependent variable)

β_o : Intercept

β_i : i = 1, 2, 3, 4 ≡ Coefficients of the independent variables

Xi : I = 1, 2, 3, 4 ≡ The independent variables (the effects of the role of the National Government, the effects of the role of the County Governments, the effects of the role of mortgage distribution channels and the effects of the role of property developers, μ : Error term which is assumed to be normally distributed with mean zero and constant variance.

Therefore, the modelled regression equation is:

LIHA = -0.34 + 0.249 NAT GOV- 0.139 COU GOV + 0.152 MDC+ 0.160 PD + μ

Where

LIHA - Low income housing affordability

NAT GOV- Effects of the role of the National Government

COU GOV- Effects of the role of the County Governments

MDC- Effects of the role of mortgage distribution channels

PD- Effects of the role of property developers

Regression results in table 4.65 indicated that the relationship between low income housing affordability in Kenya and the effects of the role of National Government was positive and significant (b1=0.249, p value, 0.008). This implies that an increase in the effectiveness of the National Government policy on housing by 1 unit leads to an increase in housing affordability among low income earners by 0.249 units.

The results further indicated that the relationship between low income housing affordability and the effects of the role of County Governments was not significant (b2= - 0.139, p value, 0.108) when examining the overall model. This means that low income housing affordability cannot be explained by the actions of County Governments in Kenya. This could be explained by the fact that the County system of government is still new in Kenya. The County Governments were formed after the elections held in 2013 after the promulgation of the new constitution in 2010.Many of the county governments are still streamlining governance and service delivery in the counties and dealing with funding issues.

The results also indicated that the relationship between low income housing affordability and the effects of the role of mortgage distribution channels was positive and significant (b3=0.152, p value, 0.048). This implies that an increase in the effectiveness of mortgage distribution channels by 1 unit leads to an increase in housing affordability among low income earners in Kenya by 0.152 units.

Results also indicated that the relationship between low income housing affordability in Kenya and the effects of the role of property developers was positive and significant (b4=0.160, p value, 0.031). This implies that an increase in the effectiveness of property developers' policies on housing by 1 unit leads to an increase in housing affordability among low income earners in Kenya by 0.160 units.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study sought to evaluate the effects of supply side institutional roles on housing affordability among the low income earners in Kenya. Specifically, the study investigated four independent variables; effects of the role of the National Government housing policy, effects of the role of the County Governments housing policy, effects of the role of the mortgage distribution channels and the effects of the role of the property developers on how they determine housing affordability among low income earners in Kenya. This chapter summarizes the findings of the study, draws conclusions and makes recommendations for further studies. The conclusions drawn are on the basis of the specific objectives and research hypotheses of the study.

5.2 Summary of Findings

This section summarizes the findings of the study on the basis of the specific research objectives of the study.

5.2.1 Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners in Kenya

The first study objective of the study was to assess the effects of the role of the National Government housing policy on housing affordability among the low income earners in Kenya. The results indicated that the policies put in place by the National Government positively influenced housing affordability among low income earners in Kenya. This was evidenced by the overwhelming responses from the respondents who indicated that reviewing of the building code to allow for use of modern and appropriate technology, Zero rating VAT on building materials used to construct houses and establishment of a housing levy to enable the construction of low-income housing would lower the price of houses.

In addition the study findings revealed that offering guarantees and concessions to local and foreign investors to develop housing infrastructure, opening-up new areas for housing development through provision of trunk-infrastructure, offering tax holiday to developers and investors of a minimum of one hundred serviced plots for low-income households, offering tax holiday for developers and investors in housing units for low-income households, involving more land-buying companies in the financial system, development of regulations to guide contractor-based finance and restructuring the mandate of the National Housing Corporation to be liaising with County Governments would encourage construction of more units of low cost housing.

The study findings also revealed that reducing taxes on profits made by lenders from low income house lending, setting up a mortgage development group made up of all related sectors stakeholders and offering mortgage fund guarantee by the government to housing microfinance would lead to a reduction of mortgage interest rates. The results revealed that National Government was a key determinant of housing affordability among low income earners. This was demonstrated by the mean score of responses and also the regression coefficient. The correlation between the effects of the role of the National Government policy and housing affordability was found to be strong and statistically significant.

5.2.2 Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners in Kenya

The second objective of the study was to evaluate the effects of the role of County Governments housing policy on housing affordability among the low income earners in Kenya. The results indicated that the housing polices put in place by the County Governments in the implementation of housing policy do not have a significant influence on housing affordability among low income earners in Kenya. This was evidenced by the negative relationship between County Governments and housing affordability as shown in the overall regression model.

5.2.3 Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among the Low Income Earners in Kenya

The third objective of the study was to evaluate the effects of the role of mortgage distribution channels on housing affordability among the low income earners in Kenya. Results indicated that mortgage distribution channels positively influenced affordability of housing by low income earners in Kenya. This was evidenced by the responses from the respondents who indicated that increase in competition among the mortgage lending channels, offering guarantees to mortgage lenders lending for purchase of low cost houses by the government, appropriate management of risks of lending to lower income groups and establishment of a mortgage liquidity facility would reduce mortgage interest rates.

In addition the respondents indicated that provision of incremental housing mortgages, asking for low initial mortgage down payment and the micro-finance approach of incremental housing finance tends to increase the period of mortgage repayments. Also the respondents indicated that by the National Housing Corporation assigning a given proportion of their annual budget for low cost housing and facilitating NGO's operating in the housing sector would increase supply of low cost houses.

The findings also indicated that mortgage lenders capacity building to strengthen mortgage underwriting would increase the amount of mortgage loans lent, reducing fees charged on mortgages would reduce the amounts of initial down payments on mortgages while micro lending by housing micro finance organizations would lower the amounts of the regular mortgage payments. The results revealed that mortgage distribution channels were a key determinant of housing affordability among low income earners. This was demonstrated by the mean score of responses and also the regression coefficient. The correlation between mortgage distribution channel and housing affordability was found to be strong and statistically significant.

5.2.4 Effects of the Role of the Property Developers and Housing Affordability among the Low Income Earners in Kenya

The fourth objective of the study was to evaluate the effects of the role of property developers on housing affordability among the low income earners in Kenya. Results indicated that the effects of the role of property developers positively influenced housing affordability among low income earners in Kenya. Majority of the respondents agreed that technical assistance to increase the capacity of property developers to deliver housing units in larger quantities, raising money through sale of housing bonds by property developers, property developers relying more on equity provision and limiting excessive debt, competition among property developers and joint ventures models between property developers and land owners would lower the prices of houses.

Also majority of the respondents agreed that encouraging land-buying companies to convert into property developers, adopting cheap building technologies by developers, developing low income housing in areas where land is not very expensive, making it mandatory for every developer to commit a proportion of their housing development say like 30 % to low cost housing and acquiring cheap concessionary loans from cheap international financiers by property developers would increase the supply of houses. Additionally, the results established that property developers were key a driver in explaining housing affordability among low income earners in Kenya. There was a strong positive and significant relationship between property developers and housing affordability in Kenya.

5.3 Conclusions

Based on the findings, the study concludes as follows;

5.3.1 Effects of the Role of the National Government Housing Policy and Housing Affordability among the Low Income Earners in Kenya

National Government housing policy role is a key driver to housing affordability among low income earners in Kenya. It was possible to conclude that National Government housing policy was statistically significant in explaining housing affordability among low income earners in Kenya. It is possible to conclude that the National Government needs to put in place appropriate housing policy and internal operating procedures approved by the Ministry of Land, Housing and Urban Development to ensure that all citizens are in a position to afford housing facilities.

The policy should be clear and roles and responsibilities clearly defined and communicated to all entities that influence the supply of low cost housing. The study further concludes that National Government housing policy affects housing affordability; if the policies are well articulated and implemented, they affect housing affordability positively.

5.3.2 Effects of the Role of the County Governments Housing Policy and Housing Affordability among the Low Income Earners in Kenya

It can be concluded that the effects of the role of the County Governments does not have a significant effect on housing affordability among low income earners in Kenya. There exists a negative relationship between the effect of the role of the County Governments and housing affordability among the low income earners in Kenya. However given the constitutional mandate on the role of the County Governments on housing as indicated in the fourth schedule of the Constitution, as one of county planning and development, including housing (Republic of Kenya, 2010), it implies that the counties are largely responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans. It can therefore be concluded that the County Governments should put measures in place through effective implementation of the housing policy to ensure affordability of housing to the low income earners.

5.3.3 Effects of the Role of the Mortgage Distribution Channels and Housing Affordability among the Low Income Earners in Kenya

Mortgage distribution channels were found to determine housing affordability among low income earners in Kenya. It was possible to conclude that if there was increased level of competition among the mortgage lending channels it would make it possible to lower the mortgage rates of interest and thereby reduce the cost of houses. It can be concluded from this study that there exists a positive and significant relationship between the effects of the role of mortgage distribution channels and housing affordability among the low income earners in Kenya.

5.3.4 Effects of the Role of the Property Developers and Housing Affordability among the Low Income Earners in Kenya

Property developers' role has an effect on housing affordability among low income earners in Kenya. It can therefore be concluded that if there is an effective system and policies for technical assistance to increase the capacity of property developers to deliver housing units in larger quantities it would lower price of houses. It can be concluded that there is a positive and significant relationship between property developers and housing affordability among low income earners in Kenya. This implies that property developers' roles were statistically significant in explaining housing affordability among the low income earners in Kenya.

5.4 Recommendations for Policy

Based on the results, findings and conclusions the following recommendations have been made.

The role of the National Government on housing as indicated in the fourth schedule of the constitution is one of developing the housing policy. It is in charge of housing regulatory framework (Republic of Kenya, 2010). As the entity incharge of developing the housing policy the following recommendations are made as regards the effects of the role of the National Government housing policy in making houses affordable to the low income earners in Kenya. It is recommended to the National Government to ensure that they put in place policies and procedures to be adhered to during supporting the incremental housing process.

The study findings indicated that financing low income housing programmes can be done by blending market-based finance and well targeted subsidies. Therefore in addition to this market-based housing finance strategy, subsidies could be introduced to support individuals who might not be able to meet the terms of the market-based financing strategy. It is also recommended that providing credit guarantees to market-based financial institutions to lend to the low income groups has been proven by the study to be another effective tool of providing affordable housing finance to these income groups. It is also recommended that the National Government facilitates establishment of a mortgage liquidity facility that will allow access to longer term finance to lenders who may not otherwise be able to raise sufficient long term funding from deposits.

The study recommends that the Ministry of Land, Housing and Urban Development should ensure they evaluate the success of National Government policies in particular the land policy and its ability to make land available for accelerating affordable housing delivery, and whether the establishment of housing development agency to facilitate the process of making land available for affordable housing is feasible.

It is also recommended that the National Government considers establishment of a housing levy to enable the construction of low-income housing. The National Government should facilitate the reviewing of the building code to allow for use of modern and appropriate technology as this would lower the price of houses. Provision of tax holiday for developers and investors in housing units for low-income households who develop a specified number of houses within a specified period of time (like five hundred housing units for low income earners within a period of like three years) is also recommended.

Establishment of a mortgage fund guarantee to be offered by the National Government to mortgage lenders including housing microfinance whereby the National Government should guarantee a specific percent of the mortgage loans borrowed by the low income earners is also recommended. Making it mandatory for every developer to commit a proportion of their housing development say like 30 % to low cost housing is also recommended. The study also recommends participation of all stakeholders in the formulation, review, repeal and amendment of the existing legal framework governing operations of the housing sector and tax rebates as well as incentives to motivate developers leading to increased investment in low income housing.

The role of the County Governments on housing as indicated in the fourth schedule of the Constitution is one of county planning and development, including housing. Counties will largely be responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans (Republic of Kenya, 2010). County Governments will majorly deal with actualizing the housing framework by way of implementation. As the entity responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans the following recommendations are made as regards the role of the County Governments in making houses affordable to the low income earners in Kenya.

It is recommended to the County Governments to ensure that they open-up new areas within the counties for low cost housing. The County Governments should set land aside to develop low cost houses in areas where land is not very expensive within the counties. It is recommended that they allocate urban and peri-urban land for the development of housing for low-income groups through public-private partnerships. This can be done through supply of off-site infrastructure and land servicing (development of trunk infrastructure, water and sanitation) in areas of low cost residential housing as this would reduce costs for developers and motivate them to construct more units of low cost housing.

It is recommended to the mortgage lenders to reduce cost of debt financing. It is therefore recommended that housing finance institutions should relax the rate of interest and eliminate the use deposits as their main source of funding. They should seek to fund their mortgage loans from long term sources. They should also formulate new as well as review existing housing finance policies to ensure that low income housing is given priority.

It is recommended to the mortgage lenders to put measures in place that will lead to appropriate management of risks of lending to lower income groups. They should build their capacity to strengthen mortgage underwriting. It is recommended to the mortgage lenders to provide incremental housing mortgages as the low income earners build their houses incrementally as opposed to a one time mortgage loan to build or buy a house. It is also recommended to the mortgage lenders to be asking for low initial mortgage down payment and to reduce or abolish fees charged on mortgage loan processing.

It is also recommended that the National Housing Corporation should assign a given proportion of their annual budget for low cost housing. It is recommended that national housing corporation be transformed into a National Housing Authority and that its mandate should be changed so as to concentrate their efforts on low price housing projects for sale in response to the demand of low income earners. This is because the middle and upper income housing segment needs are being addressed by the private sector. It is also recommended that the National Housing Corporation should liaise with the County Governments in all the counties to address the issue of low income housing in each county.

It is recommended that the property developers should increase their capacity to deliver housing units in larger quantities as this would enable them enjoy economies of scale. They should use appropriate technology to drive supply of housing stocks in a sustainable way. The appropriate technology should be locally available to ensure that the cost of building materials goes down. The property developers should also raise money through equity provision, sale of housing bonds and other long term sources and limit excessive debt. It is also recommended that joint ventures models between property developers be explored and promoted. It is recommended that there should be a law supervising property developers. The law should require that in every project undertaken by property developers, they should allocate a given percent, say 30% for low income housing. This percent should be arrived at through consultations with stakeholders in the industry.

5.5 Recommendations for Further Research

The area of housing for low income households is vast and very little research has been done especially in the Kenyan context. One area for research would be a study on the effects of property speculation (land and real estate) on affordability of housing in Kenya. Another study that could be carried out is on the challenges facing key players on housing development for the low income market in Kenya. Another study would be one to consider the role that rental housing could play in improving housing conditions and bridging some of the affordability gap for those households not in a position to buy a home.

REFERENCES

AAPOR. (2011). *America Association for Public Opinion Research. 111 Deer Lake Road, American Suite 100, Deerfield:* America Association for Public Opinion Research.

Aissami,N .(2012). Affordable Housing Finance in Morocco, Housing Finance in Emerging Markets, *5th Global Housing Finance Conference*, Centre for Affordable Housing Finance in Africa, Finmark Trust, Retrieved from http://www.housingfinanceafrica.org/wp-content/uploads/2011/11/Discussion-Paper-HMF-Regional-Support-Programme.pdf.

Allen, J. (2011).*Competition in the Canadian Mortgage Market*; Financial Stability Department, Bank of Canada Review, Toronto: Bank of Canada.

Allen, J., Clark, R., & Houde, J.F.(2011). *Discounting; in Mortgage Markets*. Bank of Canada working paper no. 2011-3. Toronto: Bank of Canada.

Anderson, M.(2005) . *A Community Guide to Creating Affordable Housing*. Business and Professional People for the Public Interest (BPI), Chicago: Regional Affordable Housing Initiative.

Ambrose, P., & Barlow, J. (1997) .*The Real Cost of Poor Homes, Royal Institution of Chartered Surveyors*, Health and Social Policy Research Centre, England: University of Brighton.

Apga,W.C., & Calder, A. (2005). *The Dual Mortgage Market: The Persistence of Discrimination in Mortgage Lending.* Joint Center for Housing Studies, Massachusetts: Harvard University

Arrieta,G.M.(2005). *Mortgage Loans and Access to Housing for Low-Income Households in Latin America*. Cepal Review 85.

Arvanitis,Y. (2013). *African Housing Dynamics: Lessons from the Kenyan Market*., Africa Economic Brief. Nairobi: African Development Bank Group.

Aziz,W.N.(2007). *Low-Cost Housing Policy in Malaysia: The Challenge of Delivery*. PhD Thesis. Dundee: University of Dundee,

Babbie, E.R. (1990). *Survey Research Methods*. 2nd edition. Wadsworh Publishing Company.

Bailey, C.A. (1996). *A guide to field research. Thousand Oaks*, CA: Pine Forge.

Ball, M. (1996). *Investing in New Housing: Lessons for the future*, Bristol: The Policy Press.

Battellino, R. (2008). *Background Notes for Opening Remarks to Senate Select Committee on Housing Affordability in Australia*, Melbourne: Senate Select Committee on Housing Affordability.

Beck, M., Bryman, A., & Liao, T. (2004). *The Sage encyclopedia of social science research methods*. Thousand Oaks, Calif: Sage. Retrieved from: http://srmo.sagepub.com/view/the-sage-encyclopedia-of-social-science-research-methods/n884.xml.

Belhaj,I.(2008).*Morocco's Fogarim Fund Benefits Aspiring Homeowners*. Magharebia, Casablanca.

Bennett,P.,Peach,R., & Peristiani,S.(1998). *Structural Change in the Mortgage Market and the Propensity to Refinance.* Working Paper. New York: Federal Reserve Bank of New York.

Berry, M. (2002). *Expanding the supply of affordable housing in Australia* Sidney: Australian Housing and Research Institute.

Berry, M. (2010). *Housing Wealth and Mortgage Debt in Australia, in S J Smith and BA Searle* (Ed.), The Economics of Housing: The Housing Wealth of Nations, West Sussex: Wiley-Blackwell.

Borg,W.R., & Gall,M.D. (2007). *Educational Research: An Introduction* (Seventh Edition). New York: Longman.

Brooke, S. (2006) .'*Building for Inclusion? Housing Output and Part V of the Irish Planning and Development System*'. Dublin: Focus Ireland.

CAHF. (2012). *Yearbook 2012: Housing Finance in Africa – a Review of Some of African's Housing Finance Markets*, : Finmark Trust.

CAHF.(2013**)**. *Scoping Study: Overview of the Housing Finance Sector in Zambia*, Centre for Affordable Housing Finance in Africa, Johanesburg: Finmark Trust, retrieved from http://www.housingfinanceafrica.org/wp-content/uploads/2011/11/Discussion-Paper-HMF-Regional-Support-Programme.pdf.

Caldera, A., & Johansson, A. (2011). T*he Price Responsiveness of Housing Supply in OECD Countries* (OECD Working Paper Series) (Report).Paris: OECD.

Capital Mortgages.(2013). *Changing face of Kenya's real estate*. Retrieved from http://capitalmortgages.co.ke/changing-face-kenyas-real-estate.

Central Bank of Kenya. (2012). *Bank Supervision Annual Report*, Nairobi: Central Bank of Kenya

Chamberlin,E.H. (1933).*The Theory of Monopolistic Competition:: A Re-orientation of the Theory of Value*, Harvard: Harvard University Press.

Chambers, M. S.,Garriga, C., & Schlagenhauf, D. (2008) .*The Loan Structure and Housing Tenure Decisions in an Equilibrium Model of Mortgage Choice.*

Research Division Federal Reserve Bank of St. Louis, Working Paper Series, Missouri. St. Louis.

Chaplain,V., Kitson,E., & Thomson,K.J.(2012) . *An Overview of Australia's Housing Market and Residential Mortgage-Backed Securities.* Melbourne: Standard and Poor's Rating Services.

Chen, H. (1996). Direction, magnitude and implications of non response bias in mail surveys, *Journal of the Marketing Research Society*, 38(3), 267-276.

Chia, N, C., & Tsui, A, K. (2005). *Reverse mortgages as retirement financing instruments: An option for "Asset Rich" and "Cash Poor" Singaporeans*. Singapore: Singapore Centre for Applied and Policy Economics.

Christensen, L,.B., Johnson, R.B., & Turner, L.A. (2011). R*esearch Methods, Design, and Analysis* 11th Edition. Boston: Pearson Education, Inc.

Cohen, L., Lawrence, M., & Morrison, K. (2000). *Research Methods in Education* (5 th Ed.). London.

Congress of the United States .(2010) . *Fannie Mae, Freddie Mac, and the Federal Role in the Secondary Mortgage Market,* Washington: Congressional Budget Office

Cooper, D.R., & Schindler, P.S. (2011). *Business Research Methods,* 11th, edition, New Delhi-India: McGraw-Hill Publishing Co. Ltd.

Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative and Mixed Methods and Approaches* (2nd ed.), Thousand Oaks, CA: Sage.

Dawson, C. (2002). *Practical Research Methods: A user friendly guide to research,* London: How to Books Ltd

De Bondt, G. J., (2002). *Retail Bank Interest Rate Pass-Through*: New Evidence at the Euro Area Level, ECB Working Paper Series No. 136.

Dijkgraaf, C. (2000). Private Building Sector in Disarray in Indonesia and Thailand, its Consequences for Social Housing: Lessons to be Learned. Paper Presented at the *ENHR 2000 Conference, Housing in the 21st Century.*

Diouf,W.(2013). *State of Housing Microfinance in Africa*, Retrieved from http://www.housingfinanceafrica.org/wp-content/uploads/2011/11.

Economic and Social Rights Centre. (2012). *Assessment of the Realization of the Right to Housing in Kenya 2011-2012*. Nairobi: Economic and Social Rights Centre.

Fettig,D.(1996). *Interview with James Tobin, Federal Reserve Bank of Minneapolis*, The Region 10,1 -15. Minneapolis: Federal Reserve Bank of Minneapolis.

Freedman, D. (2005). *Statistical models. Theory and Practice*. Cambridge: Cambridge University Press.

Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston: Pearson Education.

Garner,G.(2000).The ecology and inter-relationship between housing and health outcomes. Paper delivered to the *International Conference on Infrastructure Development and the Environment* (Iciden-Abuja), Retrieved from http://eprints.qut.edu.au/7216/1/7216.pdf.

Geisser, S., & Johnson, W. (2006). *Modes of parametric statistical inference*. Hoboken, N.J: Wiley-Interscience.

Gilbert, A. (2004). Helping the poor through housing subsidies: lessons from Chile, Colombia and South Africa, *Habitat International* 28, 13-40.

Gimeno, R., & Martínez,C. (2006). *The Interaction between House Prices and Loans for House Purchase. the Spanish Case,* Working Paper 0605, Banco de España.

Godden,B.W.G.(2004). *Sample Size Formulas*, Retrieved from http://williamgodden.com.

Golland, A. (1996). Housing Supply, Profit and Housing Production: The Case of the United Kingdom, Netherlands and Germany, *Journal of Housing and the Built Environment*, 11(1), 5-30.

Gonzales, A., & Gerardo,P. (1999): *Access to housing and direct housing subsidies: some Latin American experiences,* CEPAL Review 69,141-163.

Goodwin, M. (2001). Regulation as Process: Regulation Theory and Comparative Urban and Regional Research, In: Netherlands *Journal of Housing and the Built Environment*, 16(1), 385-407

Gorton, G.B., & Souleles, N.S.(2005). *Special Purpose Vehicle and Securitization,* Working Paper No.05-21. Wharton School, University of Pennsylvania and Nber.

Government of Namibia.(2013). *Summary of Blueprint on Mass Housing Development Initiative in Namibia*, Retrieved from http://www.housingfinanceafrica.org/wpcontent/uploads/2011/11/Discussion-Paper-HMF-Regional-Support-Programme.pdf.

Government of Singapore. (2011). *Department of statistics Singapore*. Retrieved from Department of statistics Singapore. http://singstat.gov.sg

Gual,J. (1999). Deregulation, Integration and Market Structure in European Banking, *Journal of the Japanese and International Economies*, 13, 372-396.

Gujarati, D.N. (2004). *Basic Econometrics*, 4th edition, New York: McGraw Hill.

Gurran, N., Milligan, V., Baker, D., & Bugg, L .(2007). *International Practice in Planning for Affordable Housing: Lessons for Australia.* Positioning Paper, Sydney: Australian Housing and Urban Research Institute.

Gyourko,J.(2009). *Understanding Commercial Real Estate*: Just How Different from Housing Is It?, NBER Working Paper #14708. Retrieved from http://www.nber.org/papers/w14708.

Hahn,R.(2012). *Securitization-Related Final Rules*, Retrieved from http://www.hunton.com/files/Publication/76f31d76-0884-4fda-a8a5-8f2d29733a3c/Presentation/PublicationAttachment/36170507-f472-4f55-8f83-1d73e1dd575f.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis.* Upper Saddle River, NJ: Pearson Prentice Hall.

Hayashi,F.(1982).Tobins *Marginal q and Average q : A Neoclassical Interpretation*, Econometrica 50, 213-224.

Himmelberg,C.,Mayer,C.,& Sinai,T.(2005). *Assessing High House Prices: Bubbles, Fundamentals and Misperceptions*, NBER Working Paper, 11643 .Cambridge, MA: National Bureau of Economic Research. Retrieved from http://www.singstat.gov.sg/stats/keyind.html#hhld

Huchzermeyer, M. (2006). Slum upgrading initiatives in Kenya within the basic services and wider housing market: A housing rights concern. *Discussion Paper No.1/2006 Kenya Housing Rights Project,* COHRE Africa Programme Centre on Housing Rights and Evictions, Geneva.

Hurt, S. (2010). *Affordable housing defined*. Retrieved from http://sacramentopress.com/2010/05/03/affordable-housing-defined.

Iacobucci, E.M., & winter, R.A.(2005). Asset Securitisation and Asymmetric Information. *Journal of Legal Studies* 34, 161–206.

Israel, G. D. (2010) . *Sampling the Evidence of Extension Program Impact*. *Program Evaluation and Organizational Development.* IFAS, University of Florida, Florida.

IUHF.(2000). *International Union Housing Finance Source book, Facts and Figures.* Retrieved from http://www.housingfinance.org/uploads/Publicationsmanager.

Jessop,B.(1990). *State Theory: putting capitalist states in their place*, London: Polity Press.

Jud,D.G., & Winkler,D.T.(2003).The Q Theory of Housing Investment, *Journal of Real Estate Finance and Economics* 27, 379- 392.

Kalema,W.S., & Kayiira,D .(2012).*Overview of the Housing Industry and Housing Finance Sector in Uganda* Retrieved from http://www.housingfinanceafrica.org/wp-content/uploads.

Kariuki,C. (2013). *Expensive mortgages act as clamp on home ownership growth,* The Mortgage Company, Nairobi Retrieved from www.tmcafrica.com.

Katz, B., Turner, M., Brown, K., Cunningham, M., & Sawyer, N. (2003). *Rethinking Local Affordable Housing Strategies: Lessons from 70 Years of Policy and Practice*, Brookings Institute Center on Urban and Metropolitan Policy and Urban Institute, Washington, Retrieved from http://www.brookings.edu/dybdocroot/es/urban/vouchers/report.pdf.

Kenya Revenue Authority. (2012). Real *Estate Sector, Tax Incentives* Retrieved from http://www.kra.go.ke/notices/pdf/Tax%20Incentives%20Available.

Kigige, A.M. (2011). Factors Influencing Real Estate Property Prices: A Survey of Real Estates in Meru Municipality, Kenya. *Journal of Economics and Sustainable Development*, 2(4), 67-576.

Kihato, M.(2012). *Infrastructure and housing finance: exploring the issues in Africa,* Centre for Affordable Housing Finance in Africa, Johanesburg: Finmark Trust, Retrieved fromhttp://www.housingfinanceafrica.org/wp-content/uploads/2011/11/Discussion-Paper-HMF-Regional-Support.

KNBS. (2010). *Leading Economic Indicators.* Retrieved from http://www.knbs.or.ke.

Knight Frank.(2013). *The Wealth Report 2012*. Knight Frank. Retrieved from http://www.slideshare.net/TheWealthReport/the-wealth-report-2012-knight-frank.

Kombo, K. D., & Tromp, A. L. (2006). *Proposal and Thesis Writing*: *An Introduction*,. Nairobi: Pauline Publications Africa.

Kothari, C.R. (2004). *Quantitative Techniques.* New Delhi: New Age International publishers.

Kranendonk, V.(2008). *Are Dutch house prices overvalued?* CPB Memorandum 99.

Kwitko, L. (1989). *The dynamics of shelter in Hong Kong: local manifestations and global linkages*. A MURP Paper, Department of Urban and Regional Planning, University of Hawaii, pp.443-462.

Laffont, J.J., & Tirole, J. (2000). *Competition in Telecommunications*, Cambridge, Mass.: MIT Press.

Laffont, J. J., & Tirole, J. (1993). *A Theory of Incentives in Procurement and Regulation*, Cambridge, Mass.: MIT Press.

LaSalle,J.L.(2012). *Affordable Housing in India; an Inclusive Approach to Sheltering the Bottom of the Pyramid.* Retrieved from www.joneslanglasalle.co.in.

Levy, B., & Spiller, P.T. (1994). The Institutional Foundations of Regulatory Commitment: A Comparative Analysis of Telecommunications Regulation, *Journal of Law, Economics and Organization*, 10 (2), 201-46.

Maclennan, D., & Williams, P. (1990). *Affordable Housing in Britain and America*, New York: Joseph Rowntree Foundation

Manoj,P.K.(2004). *Dynamics of Housing Finance in India, Bank Quest, Vol.75, No.3, Sept. Kadiyala, Suneetha., Scaling up Kudumbashree – Collective Action for Poverty Alleviation and Women Empowerment,* Paper No.180, IFPRI.

Manoj,P.K.(2010).Prospects and Problems of Housing Microfinance in India: Evidence from "Bhavanashree" Project in Kerala State. *European Journal of Economics, Finance and Administrative Sciences* issue 19.

Martin,R.J., & Mathema,A.S .(2008). *Housing Finance for the Poor in Morocco Programs, Policies and Institutions*. United States Agency for International Development. Washington DC: USAID

McVitty,J. (2012). *Addressing the Housing Finance Gap in Tunisia.* Affordable Housing Institute. Retrieved from. http://ahiglobal.wordpress.com/2012/10/01/addressing-the-housing-finance-gap-in-tunisia.

Mesarina,N., & Christy, C. (2007). *Getting to Scale in Housing Microfinance; A* Study of ACCION Partners in Latin America, Retrieved fromhttp://www.sida.se/PageFiles/22932/Insight_21%20%20Getting%20to%20Scale%20in%20Housing%20Microfinance.pdf.

Monk, S., Crook, T., Lister, D., Rowley, S., Short, C., & Whitehead, C. (2005). '*Land and Finance for Affordable Housing: The Complementary Roles of Social Housing Grant and the Provision of Affordable Housing Through the Planning System*'. Joseph Rowntree Foundation, York.

Mugenda,O.,&Mugenda,A.G.(2003).*Research Methods:Quantitative and Qualitative Approaches.* Acts Press, Nairobi.

Nachmias, C. F., & Nachmias, D. (2002). *Research methods in the social sciences*. 5th edition. London: Arnold.

Nachu.(2013). *Kenya's property market in 2013*. Retrieved, from http://nachu.or.ke/property-2013.

Newbery,D.(1999).*Privatization, Restructuring and Regulation of Network Industries*, Cambridge : MIT Press.

Njathi ,M.E. (2011). *The Challenges of Housing Development for the Low Income Market.* Strathmore University, Research Project, Nairobi.

Nordberg,R.(2000). *Alleviating Poverty through Housing Development,* United Nations Centre for Human Settlements, Global Overview, Washington DC:UNHCR

Norris, M., & Shiels, P. (2007). *Housing affordability in the Republic of Ireland: is planning part of the problem or part of the solution*? *Housing Studies*, 22(1). 397.

Okonkwo, O. (1998). *Housing Finance and Housing Delivery Systems in Kenya: Bottlenecks, recent developments and the way forward,* Nairobi:Housing Finance International.

Okpala, D. (1994). *Financing housing in developing countries: A review of the pitfalls and potentials in the development of formal housing finance system*. Urban Studies 31(9). 41-61

Okupe, L.(2000). The Role of the Private Sector in Housing Delivery in Nigeria –Effective Approach to Housing Delivery in Nigeria. A paper presented at *the 2-day National Seminar of The Nigerian Institute of Building*. Premier Hotel, Ibadan, Nigeria.

Onyango,D.K.(2010). *Profitability of Financing Low-Cost Housing in Kenya*. Doctoral dissertation, Laurea University of Applied Sciences, Laurea Leppavaara.

Otiso, K.M.(2003). *State, voluntary and private sector partnerships for slum upgrading and basic service delivery in Nairobi City*, Kenya, Cities, 20(4), 221 – 229.

Pigou, A. C. (1932) *The Economics of Welfare*. London: Macmillan and Co.

Polit, D.F., & Beck, C.T. (2003). *Key Concepts and Terms in Qualitative and Quantitative Research.* Nursing research: principles and research. Retrieved from:http://books.google.ca.

Pomeroy, S.(2004).*Toward a comprehensive affordable housing strategy for Canada: Finding Room: Policy Options for a Canadian Rental Housing Strategy,* Centre for Urban and Community Studies, Toronto: University of Toronto

Portner, F.E. (1999).*The Forced Evolution of Mortgage Production*. Mortgage Banking 60 (1), 76-86.

Quigley, J. M., & Raphael, S. (2004).Is Housing Unaffordable? Why Isn't It More Affordable? *Journal of Economic Perspectives,* 18(1), 191–214.

Rajapakse,P.J.(2006). *Issuance of Residential Mortgage-Backed Securities in Australia* – Legal and Regulatory Aspects. Retrieved from http://university.ucadia.info/e107_files/downloads/remedy.

REHDA. (2008).*The Way Forward for the Construction Industry*. Kuala Lumpur: Real Estate and Housing Developers' Association Malaysia.

Republic of Kenya.(2010). *The Constitution of Kenya.* Retrieved fromhttp://www.lse.co.uk/financeglossary.asp?searchTerm=andiArticle.

Safler, M., (1983). The passage to positive planning. *Habitat International*, 7(5), 105-116.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students.* 4th ed. London: Prentice Hall.

Sekaran, U.(2003). *Research Methods for Business,* (4^{th} ed.), NY: Hoboken.

Sekaran, U., & Bougie, R. (2010). *Research Methods for Business: A Skill Building Approach.* 5th edition, Chichester: Wiley.

Select Committee on Housing Affordability in Australia. (2008) . *A Good House is Hard to Find: Housing Affordability in Australia*, Sydney: The Senate, Commonwealth of Australia.

Stanely,F.J.,Blair,E.,& Alberman,E.(2000).*Cerebral Palsies: Epidemiology and Casual Pathways. Clinics in Developmental Medicine.*London: Mackeith Press.

Stiglitz, J.(1998).'Private Uses of Public Interests: Incentives and Institutions', *Journal of Economic Perspectives*, 12(2), 3-22.

Sugranyes, A.(2002). *The Public Housing Programme in Santiago, Chile: Quantity versus Quality, a 20 Year Long Dilemma*, Department of Urban Renewal and Management, Faculty of Architecture, Technical University Delft, Netherlands.

Takala,k., & Tuomala,M.(1990*). Housing Investment in Finland*, Finish Economic Papers 3 41-53.

Thalmann,P.(2006).*Triggers for Housing Development, Ecole Poly technique Federale de Lausanne,* Station 16, CH 1015.

Tharakan,K.(2006).Methodology of Social Sciences: Positivism, Anti-Positivism and the Phenomenological Mediation. *The Indian journal of social work.* Vol 01/2006;67:1631.Retrievedfromhttp://www.researchgate.net/publication/216087209.

The World Bank. (2011). *Developing Kenya's Mortgage Market*, Office of the Publisher, Report No. 63391-KE, Washington, DC: The World Bank.

Trimbath.S., & Montoya,J.(2002). *Housing Affordability in Three Dimensions: Price, Income and Interest Rates,* Policy Brief, Number 31. Los Angeles :Milken Institute

UNCSH. (1990).*The Global Strategy for Shelter* to the Year 2000.Nairobi: UNCSH.

UNDP. (2007). *Human Development Report 2007/2008 Fighting Climate Change: Human Security in a Divided World*. New York: United Nations Development Programme.

UN-Habitat. (2013). *Kenya Housing Market Mapping and Value Chain Analysis.* Nairobi: UNON, Publishing Services Section.

UN-Habitat.(2003). *The challenge of the slums: Global report on human settlements.* Nairobi: United Nations; Retrieved from http://www.aq.upm.es/habitabilidadbasica/docs/recursos/monografias.

UN-Habitat.(2008a). *Housing for All: The Challenges of Affordability, Accessibility and Sustainability: The Experiences and Instruments from the Developing and Developed Worlds*; Financing Urban Shelter, Nairobi: UN-Habitat.

UN-Habitat.(2008b).*The Role of Government in the Housing Market: The Experiences from Asia,* Nairobi: UN-Habitat.

UN-Habitat.(2009). *Participatory Slum Upgrading and Prevention Programme: Narrative Repo*rt Retrieved from http://www.unhabitat.org/downloads/docs/7927_54964

UN-Habitat.(2010). *Slum Upgrading Facility and the Shelter Finance for the Poor: Initiative of Cities Alliance.* Washington: UN-Habitat.

UN-Habitat.(2011). *Affordable Land and Housing in Africa*, UNON, Nairobi: Publishing Services Section.

United Nations.(2005). *Housing finance systems for countries in transition: principles and examples,* New York: United Nations.

Urban Research Centre.(2008). *Housing Affordability Literature Review and Affordable Housing Program Audit,* Sydney: University of Western Sydney.

Wachter,S.M., & Green,R.K.(2000).*The Housing Finance Revolution, Housing, Housing Finance & Monetary Policy*, Jackson Hole, Wyoming, Kansas City: Federal Research Bank of Kansas City.

Wilson, E.,& Schwartz, M.(2008). *Who Can Afford to Live in a Home ?: A look at data from the 2006 American Community Survey*, New York: US Census Bureau.

APPENDICES

Appendix I: Letter of Introduction

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: <u>REQUEST FOR RESEARCH DATA</u>

I am a student at Jomo Kenyatta University of Agriculture and Technology pursuing PhD in Business Administration (Finance). It is a requirement that as a student I should carry out research in the same field of study in partial fulfillment for the award of the degree. I am conducting a research on the effects of supply side institutional roles on housing affordability among the low income earners in Kenya

For the purpose of the research work, I would wish to collect data through the use of questionnaires on the entities that influence the supply of low cost housing which are which are the Ministry of Land, Housing and Urban Development, the National Treasury, Central Bank and CMA representing the National Government, the Nairobi County Governments Ministry of Land, Housing and Urban Development representing the County Governments, Commercial Banks, Microfinance Organizations, Housing Cooperatives, and NHC representing the mortgage distribution channels and the property developers.

Your assistance is highly appreciated.

……………………

Patrick Kibati

Appendix II: Authorization Letter from National Commission for Science Technology and Innovation.

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 310571, 2219420
Fax: +254-20-318245, 318249
Email: secretary@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No.

NACOSTI/P/14/9078/2136

Date:

24th June, 2014

Patrick Kibati
Jomo Kenyatta University of Agriculture and Technology
P.O.Box 62000-00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effects of supply determinants on housing affordability among the low income earners in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for a period ending **30th July, 2014.**

You are advised to report to **the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
Ag. SECRETARY/CEO

Copy to:

The County Commissioner
The County Director of Education
Nairobi County.

National Commission for Science, Technology and Innovation is ISO 9001: 2008 Certified

Appendix III: Questionnaire

Introduction

The following items tap into effects of supply side determinants on affordability of housing among the low income earners in Kenya. Your participation in filling this questionnaire will be highly appreciated. Your responses to this questionnaire will be handled with utmost confidentiality

Part A: Bio-Data

Name of Institution...Type of Institution...........................

Designation of respondent.................................Department/Section/Unit……............

Part B: Housing Affordability among Low Income Earners

This section has **ten** items that relate to housing affordability among low income earners.

Please, indicate with a tick (√) your opinion on each of the statements. The meaning of the scores 1 -5 is given below.

[5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree)

1	Lowering price of houses would increase affordability of housing to the low income earners	5	4	3	2	1
2	Construction of low cost houses would increase affordability of housing to the low income earners	5	4	3	2	1
3	Increasing the supply of low cost houses would increase affordability of housing to the low income earners	5	4	3	2	1
4	Increasing the number of people who spend less than 30 % of their income on housing would increase affordability of housing to the low income earners	5	4	3	2	1

5	Increasing the number of those capable of qualifying for mortgage loans would increase affordability of housing to the low income earners	5	4	3	2	1
6	Innovation and adoption of modern building technology would increase affordability of housing to the low income earners	5	4	3	2	1
7	Lowering of interest spreads would increase affordability of housing to the low income earners	5	4	3	2	1
8	Lowering mortgage interest rates would increase affordability of housing to the low income earners	5	4	3	2	1
9	Delivering low income house in large scale would increase affordability of housing to the low income earners	5	4	3	2	1
10	Depending on long term sources of capital by mortgage lenders would increase affordability of housing to the low income earners	5	4	3	2	1

Part C: Role of the National Government in facilitating affordability of housing among Low Income Earners.

The role of the National Government on housing as indicated in the Fourth Schedule of the new Constitution is that of developing the National Housing Policy. ie It is in charge of housing regulatory framework. This section has twenty items that relate to the effects of the role of the National Government in facilitating affordability of housing for low income earners through appropriate policy formulation.

Please, indicate with a tick (√) your opinion on each of the statements. The meaning of the scores 1 -5 is given below.

[5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

1	Reviewing of the building code to allow for use of modern and appropriate technology would lower the price of houses	5	4	3	2	1

2	Opening-up new areas for housing development through provision of trunk-infrastructure would increase the supply of low cost houses	5	4	3	2	1
3	Zero rating VAT on building materials used to construct houses would lower the price of houses	5	4	3	2	1
4	Establishment of a housing levy to enable the construction of low-income housing would lower the price of houses	5	4	3	2	1
5	Development of regulations to guide contractor-based finance would lead to the construction of more units of low cost housing	5	4	3	2	1
6	Restructuring the mandate of the National Housing Corporation to be liaising with County Governments would lead to construction of more units of low cost housing	5	4	3	2	1
7	Introduction of well-targeted direct mortgage subsidies for low income earners would increase the number of Kenyans capable of affording houses.	5	4	3	2	1
8	Offering guarantees and concessions to private local and foreign investors to develop housing infrastructure would encourage developers to construct more units of low cost housing	5	4	3	2	1
9	Tax holiday for developers and investors in housing units for low-income households would encourage developers to construct more units of low cost housing	5	4	3	2	1
10	Offering tax holiday to developers and investors of a minimum of one hundred serviced plots for low-income households would encourage developers to construct more units of low cost housing	5	4	3	2	1
11	Allowing access to pension benefits for payment of down payment for a house would increase the number of people able to obtain mortgage loans	5	4	3	2	1

12	Increasing efficiency and transparency in the registration of land transfers and charges would encourage developers to construct more units of low cost housing	5	4	3	2	1
13	Reducing taxes on profits made by lenders from low income house lending would lead to a reduction of mortgage interest rates	5	4	3	2	1
14	Setting up a mortgage development group made up of all related sectors stakeholders would lower mortgage interest rates	5	4	3	2	1
15	Establishment of mortgage consumer protection framework would increase mortgage loans uptake	5	4	3	2	1
16	Mortgage fund guarantee offered by the government to housing microfinance lead to a reduction of mortgage interest rates	5	4	3	2	1
17	Prohibiting micro – finance institutions from collecting deposits tend to increase mortgage interest rates	5	4	3	2	1
18	Promoting participation of insurance companies and pensions funds in the housing finance market would increase the amount of long term loans available to mortgage providers	5	4	3	2	1
19	Allowing members of the public to use their life insurance scheme funds as guarantee for housing loans would lower the amounts of the regular mortgage payments	5	4	3	2	1
20	Involving more land-buying companies in the financial system would lead to the construction of more units of low cost housing	5	4	3	2	1

Part D: Role of the County Governments in facilitating affordability of housing among Low Income Earners

The role of the County Governments on housing as indicated in the Fourth Schedule of the Constitution is that of county planning and development, including housing. Counties will largely be responsible for construction and management of housing stock and ensuring an adequate housing supply for Kenyans. ie County Governments will majorly deal with actualizing the framework by way of implementation.

This section has ten items that relate to the effects of the role of the County Governments in facilitating affordability of housing for low income earners through policy implementation.

Please, indicate with a tick (√) your opinion on each of the statements. The meaning of the scores 1 -5 is given below.

[5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

1	Developing low cost housing in areas where land is not very expensive would lower the price of houses	5	4	3	2	1
2	Enhancement of the planning and management of house building approvals at the County level would lower the price of houses	5	4	3	2	1
3	Improvement of revenue generation capacity of County Governments would increase the supply of low cost houses	5	4	3	2	1
4	Opening-up new areas within the counties for low cost housing would increase the supply of low cost houses	5	4	3	2	1
5	Allocation of urban and peri-urban land for the development of housing for low-income groups through public-private partnerships would encourage developers to construct more units of low cost housing	5	4	3	2	1

6	Provision of land for low cost residential housing development would encourage developers to construct more units of low cost housing	5	4	3	2	1
7	Supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water and sanitation, etc.) in areas of low cost residential housing would encourage developers to construct more units of low cost housing	5	4	3	2	1
8	Reviewing laws to reduce bureaucracy on housing approval processes would lower the price of houses	5	4	3	2	1
9	Acquiring cheap concessionary loans from cheap international financiers by property developers would lower mortgage interest rates	5	4	3	2	1
10	Attracting foreign investors to invest in low cost housing would increase the units of low cost housing	5	4	3	2	1

(Continued)

Part E: Role of Mortgage Distribution Channels in facilitating affordability of housing among Low Income Earners

There are four mortgage distribution channels namely; Depository systems (lending funded by savings (eg Commercial Banks and Housing Microfinance Organisations), Directed credit (raised by taxes like National Housing Corporation), Specialized mortgage lending (through government regulated or owned banks like HFCK, National Bank Limited and Consolidated Bank Limited) and through Securitization (involving the secondary market).

This section has twelve items that relate to the effects of the role of Mortgage Distribution Channels in facilitating affordability of housing for low income earners.

Please, indicate with a tick (√) your opinion on each of the statements. The meaning of the scores 1 -5 is given below.

[5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

1	Increase in competition among the mortgage lending channels would lower mortgage rate of interest	5	4	3	2	1
2	Establishment of a mortgage liquidity facility would lower mortgage interest rates	5	4	3	2	1
3	Appropriate management of risks of lending to lower income groups would reduce mortgage interest rates	5	4	3	2	1
4	Mortgage lenders capacity building to strengthen mortgage underwriting would increase the amount of mortgage loans lent	5	4	3	2	1
5	Provision of incremental housing mortgages would increase affordability of houses to the low income earners	5	4	3	2	1
6	Asking for low initial mortgage down payment would increase the period of mortgage repayments	5	4	3	2	1
7	Micro-finance approach of incremental housing finance tends to increase the period of mortgage repayments	5	4	3	2	1
8	Offering guarantees to mortgage lenders lending for purchase of low cost houses by the government would reduce mortgage interest rates	5	4	3	2	1
9	Facilitating NGO's operating in the housing sector would increase supply of low cost houses	5	4	3	2	1
10	Reducing fees charged on mortgages would reduce the amounts of initial down payments on mortgages	5	4	3	2	1
11	Micro lending by housing micro finance organizations would lower the amounts of the regular mortgage payments	5	4	3	2	1

12	National housing corporation assigning a given proportion of their annual budget for low cost housing would increase supply of low cost houses	5	4	3	2	1

(Continued)

This section has ten items that relate to the effects of the role of Property Developers in facilitating affordability of housing for low income earners. Property developers here refer to 'market developers' who build housing units to sell on to end-users at a profit and not 'investor developers'(those who build with a view to keep ownership of the completed building).

Please, indicate with a tick (√) your opinion on each of the statements. The meaning of the scores 1 -5 is given below.

[5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree)

1	Technical assistance to increase the capacity of property developers to deliver housing units in larger quantities would lower the price of houses	5	4	3	2	1
2	Raising money through sale of log term housing bonds by property developers would increase the period of mortgage repayments	5	4	3	2	1
3	Acquiring cheap concessionary loans from cheap international financiers by property developers would increase the supply of low cost houses	5	4	3	2	1
4	Adopting cheap building technologies would increase the supply of low cost houses	5	4	3	2	1
5	Property developers relying more on equity provision and limiting excessive debt would lower the price of houses	5	4	3	2	1
6	Developing low income housing in areas where land is not	5	4	3	2	1

	very expensive would increase the supply of low cost houses					
7	Joint ventures models between property developers and land owners would lower the prices of houses	5	4	3	2	1
8	Making it mandatory for every developer to commit a proportion of their housing development say like 30 % to low cost housing would make developers to construct more units of low cost houses	5	4	3	2	1
9	Encouraging land-buying companies to convert into property developers would increase the supply of low cost houses	5	4	3	2	1
10	Competition among property developers would lower the prices of houses	5	4	3	2	1

Appendix IV: Directory of Commercial Banks in Kenya as at December 2013

1) African Banking Corporation Limited
2) Bank of Africa Kenya Limited
3) Bank of Baroda (K) Limited
4) Bank of India
5) Barclays Bank of Kenya Limited
6) CFC Stanbic Bank Limited
7) Charterhouse Bank Limited(Under - Statutory Management)
8) Chase Bank (K) Limited
9) Citibank N.A Kenya
10) Commercial Bank of Africa Limited
11) Consolidated Bank of Kenya Limited
12) Co-operative Bank of Kenya Limited
13) Credit Bank Limited
14) Development Bank of Kenya Limited
15) Diamond Trust Bank Kenya Limited
16) Dubai Bank Kenya Limited
17) Ecobank Kenya Limited
18) Equatorial Commercial Bank Limited
19) Equity Bank Limited
20) Family Bank Limited
21) Fidelity Commercial Bank Limited
22) Guaranty Trust Bank (K) Limited (Formely-Fina Bank Limited)
23) First Community Bank Limited
24) Giro Commercial Bank Limited
25) Guardian Bank Limited
26) Gulf African Bank Limited
27) Habib Bank A.G Zurich
28) Habib Bank Limited
29) Imperial Bank Limited

30) I & M Bank Limited
31) Jamii Bora Bank Limited
32) Kenya Commercial Bank Limited
33) K-Rep Bank Limited
34) Middle East Bank (K) Limited
35) National Bank of Kenya Limited
36) NIC Bank Limited
37) Oriental Commercial Bank Limited
38) Paramount Universal Bank Limited
39) Prime Bank Limited
40) Standard Chartered Bank Kenya Limited
41) Trans-National Bank Limited
42) UBA Kenya Bank Limited
43) Victoria Commercial Bank Limited

Source: Central Bank Supervision Annual Report (2013)

Appendix V: Microfinance Organizations with Headquarters in Nairobi

Deposit taking Microfinance

1) Century DTM Ltd
2) Faulu Kenya DTM
3) Kenya Women Finance Trust
4) Rafiki Deposit taking Microfinance Ltd
5) Remu DTM Ltd
6) SMEP DTM
7) Sumac Credit DTM Ltd
8) UandI Deposit Taking Microfinance Limited
9) Uwezo DTM Ltd

Non - Deposit Taking Microfinance

1) BIMAS
2) Blue Limited
3) Canyon Rural Credit Ltd
4) Eclof Kenya
5) Focus Capital Limited
6) Fountain Credit Services Ltd
7) Fusion Capital Ltd
8) Greenland Fedha Ltd
9) Indo Africa Finance
10) Jitegemea Credit Scheme
11) Jitegemee Trust
12) Juhudi Kilimo Co.Ltd
13) Kadet
14) K-rep Development Agency
15) Mespt
16) Micro Africa Ltd
17) Opportunity Kenya

18) Milango Financial Services
19) Molyn Credit Ltd
20) Musoni Kenya Ltd
21) Nationwide Credit Kenya Ltd
22) Ngao Credit Ltd
23) Oikocredit
24) Opportunity Kenya
25) One Africa Capital Ltd
26) Platinum Credit Limited
27) Rupia Ltd
28) Samchi Credit Limited
29) Select Management Services Ltd
30) Sisdo
31) Springboard Capital
32) Taifa Options Microfinance
33) Women Enterprise Solutions
34) Yehu Microfinance Trust
35) Youth Initiatives – Kenya (YIKE)

Source: Association of Microfinance Institutions in Kenya

Appendix VI: Housing Co-operatives with Headquarters in Nairobi

1) AfyaNet Housing Coop Society
2) Akwana Housing Coop Society
3) Arise and Shine Housing Coop Society
4) Anmu Housing Coop Society
5) APS Baraka Housing Coop Society
6) ASPCO Housing Coop Society
7) Baraka Housing Coop Society
8) Bellevue Housing Coop Society
9) Bews Housing Coop Society
10) Chai Housing Coop Society
11) Chetu Housing Coop Society
12) DNS Housing Coop Society
13) Embakasi Housing Coop Society
14) Emmanuel Kanuku Housing Coop Society
15) Faith Foundation Housing Coop Society
16) Future Housing Coop Society
17) Ger Housing Coop Society
18) Good Neighbours Housing Coop Society
19) Hadassa Housing Coop Society
20) HERS Housing Coop Society
21) Homeland Housing Coop Society
22) Huruma Housing Coop Society
23) ICEA Housing Coop Society
24) Imani Saika Housing Coop Society
25) Jasho Housing Coop Society
26) Juhudi Multipurpose Housing Coop Society
27) Kabatano Housing Coop Society
28) Kambuki Housing Coop Society
29) Kemri Villas Housing Coop Society

30) Kandara Bidii Housing Coop Society
31) Kariobangi Housing Coop Society
32) Kamulu Housing Coop Society
33) Kobole Housing Coop Society
34) Kibiko Women Housing Coop Society
35) Kilimanjaro Bahati Housing Coop Society
36) Kilom Housing Coop Society
37) Kiri Housing Coop Society
38) Laxma Housing Coop Society
39) Leo Housing Coop Society
40) Makafuka Housing Coop Society
41) Manyatta Saba Housing Coop Society
42) Marafiki Housing Coop Society
43) Maris Housing Coop Society
44) Marura Housing Coop Society
45) Mutindwa Housing Coop Society
46) Mshamba Housing Coop Society
47) Moto Staff Housing Coop Society
48) Mosica Housing Coop Society
49) NACIWASCO Housing Coop Society
50) NAHIHO Housing Coop Society
51) NAHOCO Housing Coop Society
52) Nairobi Teachers Housing Coop Society
53) Naiwest Housing Coop Society
54) Ndiwa Housing Coop Society
55) New Mathare Roundabout Housing Coop Society
56) NHIF Housing Coop Society
57) Ngumo Mbega Housing Coop Society
58) Njiriri Housing Coop Society
59) Nyakika Housing Coop Society
60) Nyaima Housing Coop Society

61) Online Housing Coop Society
62) Owab Housing Coop Society
63) Railways Housing Coop Society
64) Relisa Housing Coop Society
65) Riziki Housing Coop Society
66) Royal Housing Coop Society
67) Ruby Housing Coop Society
68) Sansora Housing Coop Society
69) Seed Share Housing Coop Society
70) Shammah Housing Coop Society
71) Shikamana Housing Coop Society
72) Simba Youth Housing Coop Society
73) Shirika Housing Coop Society
74) Starview Housing Coop Society
75) Tangaza Amani
76) Soweto Kayole Housing Coop Society
77) Tarda Housing Coop Society
78) Tassia Housing Coop Society
79) Transtana Housing Coop Society
80) Tujenge Makao Housing Coop Society
81) Uchumi Housing Coop Society
82) Urumwe wa Kandara Housing Coop Society
83) Wasena Housing Coop Society
84) Wasindikiza Housing Coop Society
85) Wendos Housing Coop Society
86) Vista Housing Coop Society
87) Yaciihu Housing Coop Society
88) Yefwe Housing Coop Society
89) Yuneh Housing Coop Society
90) Zimmerman Housing Coop Society
91) AFCO Housing Coop Society

92) Hadassa Housing Coop Society
93) Mariakani Housing Coop Society
94) Ndubia Housing Coop Society
95) Bella Housing Coop Society
96) Naitil Housing Coop Society
97) Boma Housing Coop Society
98) Fata Babu Coop Society
99) Tripple T. Housing Cooperative Society

Source: NACHU

Appendix VII: Property Developers with Headquarters in Nairobi

1) Adde Developers Ltd
2) Affordable Homes Africa Ltd
3) Africa Reit Limited
4) Amafhh Development Ltd
5) Amalgamated Properties Ltd
6) Amber Properties Ltd
7) AMS Properties Ltd
8) Anglo African Property Holdings Ltd
9) Anpemu Ltd
10) Apex Property Developers
11) Archer Dramond Morgan Ltd
12) Ark Properties and Investments Ltd
13) Axis Real Estate Ltd
14) Baraka Housing Investments
15) Bellway Villas Ltd
16) Benl Development Ltd
17) Binau Investments Co Ltd
18) Bracon Ltd
19) Buyut Properties
20) Castleland Property Consultants
21) Cereal Growers Association
22) Chigwell Holdings Ltd
23) Clozet Investments Ltd
24) Credit One Limited
25) Cretum Properties Ltd
26) Dale Investments Ltd
27) Danville Ventures
28) Delta Corps East Africa Ltd
29) Derby Holdings Ltd

30) Divisional Integrated Development Programmes Co Ltd
31) Dumark Enterprises Ltd
32) East Gate Apartments Ltd
33) Eldema Kenya Ltd
34) Exclusie Classic Properties Ltd
35) Finanacial and Property Consultants Ltd
36) Gardregal (Kenya) Ltd
37) Gimu Development Co. (K)
38) Githere Investments Ltd
39) Gribs Agencies Ltd
40) Hajar Services Ltd
41) Harp Housing Ltd
42) HassConsult
43) Hello Properties
44) Hemko Properties Ltd
45) Home Afrika Ltd
46) Interfina Ltd
47) International House Ltd
48) Jna Markerters Limited
49) Karume Investments Ltd
50) Kenjap Ltd
51) Kenya Building Society Ltd
52) Kenya Holding Ltd
53) Kiambaa Properties Co Ltd
54) Kisima Real Estate Limited
55) Knight Frank Kenya Ltd
56) Konza City and Nairobi County Properties
57) Kore Forests Ltd
58) Lela Court
59) Liberty Homes Ltd
60) M Gonella and Co Ltd

61) Mahale Estates Ltd
62) Marana Developers Ltd
63) Metropolitan Investment Co Ltd
64) Midas Development Ltd
65) Mora Hill
66) Mzima Development Ltd
67) Nemka Developers
68) Njengi Properties Ltd
69) Oakpark Properties Ltd
70) Office Suites Developers Limited
71) Olive Tree Management Estate Agency Ltd
72) Optiven Enterprises Ltd
73) Pdm(kenya) Limited
74) Petu Property Group Limited
75) Polyzone Ltd
76) Prism Investments Ltd
77) Prodigy Properties Ltd
78) Property Option and Securities Ltd
79) Prunus Investment
80) PSP Homes Ltd
81) Rajdip Housing Development
82) Real Earth Properties Ltd
83) Regent Management Ltd - Upper Hill Rd
84) Ring Kenya Ltd
85) Roack Consult Ltd
86) Samji Kala Properties Ltd
87) Santack Enterprises Ltd
88) Scion Real Estate Ltd
89) Sethnesh Ventures Ltd
90) Silver Flames Properties Ltd
91) Spring Valley Court Ltd

92) Stantack Enterprises

93) Sterling Homes Ltd

94) Sunland Real Estates

95) Suraya Property Group Ltd

96) Swing Ltd

97) Taj Mall Ltd

98) The Bella Orchid

99) Trans-Field Developers Ltd

100) TRV Developers Ltd

101) Valley Ranch Ltd

102) Vineyard Properties Ltd - South B

103) Vinodeep Investment Properties Ltd

104) Wainaina Real Estates Ltd

105) Wama Homes Holdings

106) Wathiomo K Co Ltd

107) Willmary Development

Source: Kenya Property Developers Association