

**FACTORS INFLUENCING THE PROVISION OF
HOUSING IN KENYA: A CASE OF NAIROBI COUNTY**

BY

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Requirements of the Award of Degree of Master of Arts in Project Planning
and Management of the University of Nairobi**

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DECLARATION

This research project report is my original work and has not been presented for the award of any degree in any other University.

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DEDICATION

I wish to dedication this project to my family who endured many days of my absence as worked on this research assignment. To my parents, brothers, sisters, my husband Mr. Geoffrey Omedo and to my two children Hope and Darius, your words of encouragement moved mountains. I also wish to appreciate all my friends, who contributed in various ways. You all have been a great source of inspiration.

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ABBREVIATION AND ACRONYMS

ANOVA:	Analysis of Variance
EMI:	Equated Monthly Installments
ICESCR:	International Covenant on Economic, Social and Cultural Rights
MFH:	Micro Finance Housing
NACOSTI:	National Council for Science Technology and Innovation
SMEs:	Small Medium Enterprises
SPSS:	Statistical Package for Social Scientists
UDHR:	Universal Declaration on Human Rights
UN:	United Nations

ABSTRACT

Housing and especially access to a decent standard of living is a basic human right enshrined in the Millennium Development Goals and Kenya's Constitution 2010. This is because housing plays a huge role in revitalizing economic growth both in developed countries and developing countries. The main purpose of this study was to determine the factors influencing the provision of housing in Nairobi County. The specific variables of the study were aimed at determining how cost, infrastructure, security and technology affected the subject of house provision. The study used descriptive survey research design. This design was chosen because the factors under investigation had already occurred and the researcher did not have the capacity to influence them. In addition, the study was undertaken in an expansive area. The target population for this study was 190 households. By use of Fisher et.al method, a sample of 83 households was derived. Data collection procedure adopted purely followed a social science analogy. Primary data was collected through questionnaires as the main source of data for analysis. Data analysis was done using SPSS statistical software version 21, while qualitative data was analyzed by coding according to variables in the study for efficiency. Analysis of variance test was used to check on the relationship between categories on independent variables and the dependent variable. Correlation coefficient and multivariate regression model was used to establish whether a relationship exists between the independent and dependent variables. The study found out that one unit change in cost results in 0.045 units increase in housing provision. One unit change in infrastructure results in 0.043 units increase in housing provision; a unit change in security results in 0.039 units increase in housing provision; a unit change in technology results in 0.034 units increase in housing provision. The study concluded that cost, infrastructure, security and technology influence the provision of housing. The study recommends provision of policies that allow for better and more efficient housing project processes. It also recommends improved reporting and feedback structures as well as improved stakeholder relationships with an aim of increased performance initiatives for all involved in projects delivery.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Housing plays a great role in revitalizing economic growth both in developed regions such as Europe, United States of America and the Caribbean countries, and in developing countries in sub-Saharan Africa. With shelter being among the key indicators of development (Ileri, 2010), the United Nations Universal Declaration on Human Rights gives one of the basic human rights as the 'right to a decent standard of living', central to which is the access to adequate housing. (United Nations, The Human Rights, article 25, 2008). Housing therefore act as a basic human right demand that both rural and urban dwellers should therefore have access to decent housing. Decent housing is defined as the housing that provides a foundation for, rather than being a barrier to, good physical and mental health, personal development and the fulfillment of life objectives (Seedhouse, 2006).

It is important to note here that worldwide, lack of housing is not restricted to certain parts; both rural and urban areas are indeed rife with unsafe or inadequate shelter, resulting in rampant negative impacts such as the continued proliferation of informal settlements which are drivers for environmental pollution due to the associated little or no recourse to sewage, garbage disposal and sanitation. The increasing demand of housing, coupled with this unchecked mushrooming of informal settlements, underlines the crucial necessity for all stakeholders, including the academia, to research new proactive methods of designing and innovating revolutionary materials/ technologies for constructing affordable but green buildings required to cope with the growing populations. It is important to add that the manufacturing and transport exigencies associated with the construction industry pose substantial threats and environmental damage, especially with additional energy consumption (Archer, Gatzlaff and Ling, 2006).

Third World cities are divided into two distinct sectors: formal and informal, or urban and peri-urban. Various researchers, including Kombe (2005) concedes that peri-urban areas housing development or urban informal sectors have been difficult to achieve among practitioners and researchers due to the complexity of factors.

1.1.1 Cost and Provision of Housing

In this study, cost of housing is the total amount that a homeowner spends on mortgage acquisition i.e. principal and interest of the amount, property insurance, property taxes and any other related reoccurring expenses. There is general consensus that real urban development can only be achieved if proper settlements are supported in the peri-urban sectors. These are the marginal physical and regulatory boundaries within areas in the outskirts of the formal city. In other words, local and national governments consider the urban formal sector legitimate, but do not approve of peri-urban / informal sector settlements. The focus of this research was to determine the factors influencing the provision of housing in Nairobi County. As already noted, urban slums and low-income Peri-urban areas in developing countries are characterized by a general lack of accessibility to affordable funds to be channeled towards construction of ample housing ventures.

As the scale of urbanization increases, the task of providing appropriate and affordable housing to the urban poor has persisted as one of the most intractable problems facing developing countries (Macoloo, 2009). Housing provision can be primary, secondary or tertiary. In the wake of an unprecedented pace of urbanization in sub-Saharan Africa, and a corresponding increase in urban poverty, there were many questions that this Study sought to respond to, such as how have African governments been handling this problem? What were the challenges they faced and what were the chances of these governments living up to the ideal of having "cities without slums"? (UN-Habitat, 2010).

1.1.2 Infrastructure and Provision of Housing

In the confines of this study, infrastructure refers to basic physical and organizational structures and facilities (e.g. buildings, roads, bridges, power and supplies, hospitals, transport, communication, sewage and schools) needed for operation of a society, county or enterprise. Infrastructure has been considered a major determinant to provision of housing to many Kenyan and it is the reason why people have a choice to determine where they can stay. There have been

more human settlement in areas with developed infrastructure areas than those still undeveloped. This is because people can access water, electricity, better roads for transport and enhancement of communication within the emerging members of the settler society.

Government and private sector players i.e. developers and contractors have a role to address the infrastructural problems in order to spur the development of housing units. It is important to add here that the infrastructural problems are associated to land access. With land becoming expensive, even land that had been set aside for infrastructural expansion has been targeted by unscrupulous dealers. The continued rise in population exerts significant pressure on the scarce land further negating the important matter of provision of adequate and decent housing.

Infrastructural challenges such as lack of public transportation system; road infrastructure and poor para-transit system (matatus) offers policy practitioners and other players in this sector significant opportunities for efficiency improvements. This attendant challenges, are known to morph into other socio-economic problems, such as poor road networks with lack of modal separation is known to cause high rates of traffic mortality and poor pedestrian safety.

1.1.3 Technology and Provision of Housing

The use of improved technologies in housing provision is another interesting factor that this study will seek to delve into. Technology in this study is the the art of innovating or introduction of new methods by use of materials, tools, techniques and sources of power to make work easier or more pleasant or more productive. As has been acknowledged in a wide array of policy statement, research and pronouncements, there is a need to continue investing in research in cheaper, appropriate settlement designs and housing products. This would enhance housing quality. Settlement design should be enhanced by including design experts and professionals at planning and project design stages, and enacting design guidelines for designers and regulators to achieve sustainable and environmentally efficient settlements. House designs need to be further enhanced through the enforcement of certain minimum standards, which can only be achieved through proper policy declarations. For ease of adoptability, it is widely argued that as many traditional and alternative building technologies should be used as possible. In addition, a variety of innovative house designs for subsidised houses should be encouraged through incentive schemes.

Housing supply is produced using land, labour and various inputs such as electricity and building materials. The quantity of the new supply is determined by the cost of these inputs, the price of the existing stock of houses and the technology of production. House prices and the growth rate of house price are the two measures identified by Todd (2007) of the intensity of urban housing demand. According to Todd, housing is in ‘inelastic supply in some cities either through little or lack of open land, restrictive local regulations on development that make it prohibitively expensive or slow’.

1.1.4 Security and Provision of Financing for Housing

Security has been used in this study to mean the instruments that define rightful ownership of property to be developed or acquired. Security is indeed key, since it greatly affects the access of financing for development of housing. Without a secure terrain, demonstrated by valid title and ownership or leasehold paperwork, little financial investment in the housing industry can be achieved. This only ends up exacerbating the mushrooming of informal settlements and slums, negating any prospects for growth and realization of the constitutional requirements for decent housing. Providing equitable access to housing in Kenya is an important ingredient to the attainment of the ideals encapsulated under the Constitution 2010, the Vision 2030 and its Mid-Term Plans (MTP). This can only be realised within an environment of sustainable peace and security. The creation of such an enabling environment nationally, also applies at the local level where security plays an important role in determining the provision of housing.

For urban areas, like Nairobi, the area for this study, the situation is even dire. With 48% of people in cities living under the poverty line (UNDP, Human Development Report, 2010), Kenya will need to adopt housing strategies that reflect the needs of the urban poor. The housing situation in Nairobi’s slums has been characterised by wanton insecurity, soaring crime levels, general lack of land tenure and poor planning, all of which only discourage investment in housing (Ireru 2010; Nabutola 2008). For financing institutions to invest their capital in this lucrative industry, there is need for more research on how to enact appropriate subsidies, involve the urban poor as genuine partners and develop flexible financial instruments. Studies and literature suggest the continued use of the sector as a means of generating employment,

sustaining high production levels in the construction sector, and where possible retaining labour-intensive building and construction practices.

On the issue of provision of financing for house provision, the mortgage industry in Kenya is still significantly under-developed and handicapped despite being a natural leader within the Eastern Africa region in the 1970s. For instance, the leading service providers for finance to the housing industry Kenya Commercial Bank (KCB) boasts of a commanding 15% control of the mortgage sector in Kenya (total mortgage coverage in Kenya is 22%), meaning that the mortgage industry is just on the verge of a real take-off (CBK 2010). Still, the country requires a well-developed financial service industry and systems for savings and loans, especially for products that serve both the rural and urban poor.

1.2 Statement of the Problem

Housing is a basic necessity that millions of people living in urban areas still consider a luxury (Golland, 2006). Kenya is one of the countries where housing provision has always been on a growing deficit trajectory since independence. As the last census 2008 demonstrated, the Kenyan population has been growing steadily by approximately 25%, (KNBS, 2008). Yet the country only manages to generate less than 100,000 housing units per year. It is instrumental to note that these 100,000 units cover the middle class areas, where official statistics is easy to articulate. This clearly indicates a huge housing crisis in Kenya, particularly Nairobi County where informal settlements have been mushrooming annually at a very fast rate (KDHS, 2008).

The problem of proliferation of urban settlements in Nairobi is compounded by a number of factors. The challenges associated with lack of infrastructure, insecurity, poor use of technology, lack of secure land tenure, poor planning and weak investment in housing sector by public and private players all contribute to the housing deficit within the city. The problem is even more pronounced in areas inhabited by the low-income bracket (Nabutola 2008). While the factors affecting provision of housing in Nairobi are myriad and varied, the particular interplay of technology, security in financing terms, cost and infrastructure needs to be effectively articulated, in order to guide policy, research and development. Empirical literature (Kombe, 2005; Cecilia 2008) suggests that the cost of putting up housing influences the housing provision, but not much has been covered on the inter-play with other intrinsic factors inherent

within a cosmopolitan setting like that of Nairobi. Sherman 2007 and Maureen 2002 looked at how infrastructure influenced housing but majorly focused on highly developed countries. This study was conducted to determine the influence of costing, infrastructure, security and technology to the area of housing provision in Nairobi City.

1.3 Research Objectives

The study was to determine the following objectives:

1. To determine the influence of cost of financing on the provision of housing in Nairobi County
2. To determine the influence of infrastructure on the provision of housing in Nairobi County.
3. To establish the influence of security on the provision of housing in Nairobi County
4. To establish the influence of technology on the provision of housing Nairobi County

1.4 Research Questions

The study was guided by the following research questions:

1. How did cost of housing influence the provision of housing in Nairobi County?
2. How did infrastructure influence the provision of housing in Nairobi County?
3. How did security (or the lack of it thereof) influence the provision of housing in Nairobi County?
4. How did technology influence the provision of housing in Nairobi County?

1.5 Significance of the Study

Management

An empirical analysis of the factors around costing, infrastructure, security and technology to the area of housing provision in Nairobi City offers useful insights to policy makers and other practitioners in the mortgage industry to develop sound strategies that will spurt provision of

housing in the country. The findings are particularly useful to the national agent, the National Housing Corporation (NHC) and other key players in the real estate industry (banks, real estate companies, developers, and home owners etc.) in establishing the factors influencing the provision of housing in Nairobi County. With the knowledge and insight on the factors influencing provision of housing in Nairobi County, these players will be in a better position to manage their projects more efficiently to respond to the growing demand for affordable housing in the country.

Academicians/researchers

Academicians have the opportunity to use the study as reference material in other studies in the future. Further studies can be conducted in the area of provision of housing in Kenya using this research as a basis or foundation. Policy makers can also use the study as a guide in designing, developing and implementing policies to regulate and stimulate growth in this sector. This is particularly critical, under the new governance structure recognizing counties as critical units of governance.

1.6 Limitations of the Study

A study of such magnitude requires a lot of time, patience and determination, and is nonetheless bound to face some limitations. The main limitation which affected this study ranged from logistical, financial, and to time. On questionnaire distribution, it was hoped that respondents would be home-owners and receptionists, but on a number of occasions, the questionnaires were left to home care takers. To mitigate this challenge, the researcher had to set up a number of follow up appointments with a number of the home owners to ensure congruence between questionnaire verdict and their expert opinions. Accessing expert respondents and professionals in the banking sector, National Housing Corporation, architectural firms, survey and quantity survey areas proved tough. This is because these experts are always busy, and have to be reminded a number of times before they submitted their questionnaires. It is important to note here that the researcher had sought a transmittal permit which was handy in securing the access them.

1.7 Delimitation of the Study

The study entirely focused on the factors influencing the provision of housing in Nairobi County. The provision of housing in the area is affected with factors such as cost, infrastructure security, and technology of housing in Nairobi County. The study was delimited to Nairobi County alone.

1.8 Definition of Significant Terms used in the Study

1. **Cost of Housing:** The total amount that a homeowner spends on mortgage acquisition i.e. principal and interest of the amount, property insurance, property taxes and any other related reoccurring expenses.
2. **Freehold:** The owner of the freehold completely owns both the property itself and on which the property is situated. The owner is responsible for the upkeep of the property.
3. **Infrastructure:** Refers to basic physical and organizational structures and facilities (e.g. buildings, roads, bridges, power and supplies, hospitals, transport, communication, sewage and schools) needed for operation of a society, county or enterprise.
4. **Leasehold:** The property is owned for a specific number of years, as a set out in the lease. The period is between 45 and 99 years and ground rates are payable annually.
5. **Provision of Housing:** Is the availability of affordable housing to everyone by either private sectors or government.
6. **Security:** This refers to the instruments that define rightful ownership of property to be developed or acquired.
7. **Technology:** The art of innovating or introduction of new methods by use of materials, tools, techniques and sources of power to make work easier or more pleasant or more productive.

1.9 Organization of the Study

Chapter One entails the Background of the Study, the Statement of the Problem, Research Objectives, Research Questions, Significance of the study, delimitations of the study and definition of significance terms in the study.

Chapter Two covers the Literature Review, Theoretical Framework, Conceptual Framework, and the Research Gaps of the Study.

Chapter Three details the Research Methodology used, Research Design, the Target Population, Sampling Design and Procedure, sample size, Data Collection, Validity and Reliability of Instruments, Data Collection Procedure, Data Analysis, Ethical Considerations and Operationalization of Variables

Chapter Four covers the research findings. The chapter reports on findings of the questionnaires that were sent out to members of the different groups. It contains information relating to the four areas of the specific research objectives

Chapter Five covers the research summary, conclusions and recommendations. It further covers areas of future research that emanates from the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the literature review of the study, theoretical framework, conceptual framework, and research gap. The literature review provided the reader with an explanation of the theoretical rationale of the problem being studied as well as what research that has already been done and how the findings relate to the problem at hand.

2.2 The Concept of Provision of Housing

Housing is paramount to human existence as it ranks among the top three needs of man Erguden (2001). The provision of adequate housing in any country is very vital as housing is a stimulant of the national economy. Housing is a set of durable assets, which accounts for a high proportion of a country's wealth and on which households spend a substantial part of their income (Hoek-Smit, 2011). It is for these reasons that housing has become a regular feature in economic, social and political debates often with highly charged emotional contents. The problems of population explosion, continuous influx of people from the rural to the urban centres, and the lack of basic infrastructure required for good standard of living have compounded housing problems over the years (Macoloo, 2009). Access to this basic need by the poor who constitute the largest percentage of the world population has remained a mirage and it needs to be critically addressed (Olotuah, 2010). However the poor have been disadvantaged on access to information and are not considered to be credit worth for financing to have decent housing.

Jiboye (2011) defined housing as a permanent structure for human. It is also a home, building or structure that is a dwelling or place for habitation by human beings. The term "house" includes many kinds of dwellings, ranging from rudimentary huts of nomadic tribes to free standing individual structures. He continues by referring to it as a dwelling place, constructed as a home for one or more persons.

The right to housing in international law is recognized under Article 11 of the 1966 International Covenant on Economic, Social and Cultural Rights (ICESCR) which provides for "the right of everyone to an adequate standard of living for himself and his family, including adequate food,

clothing and housing, and to the continuous improvement of living conditions”. Kenya is party to ICESCR, having ratified it in 1972. Article 25 (1) of the Universal Declaration on Human Rights (UDHR) sets out the basis for the right to adequate housing by providing that: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care.”

According to the Constitution of Kenya (2010), the right to housing is now a constitutional right provided for in Kenya’s expansive Bill of Rights. Section 43 (1) (b) of the constitution provides that every person has the right to accessible and adequate housing and reasonable standard of sanitation. Rapid urbanization has shaped the question of adequate housing in Kenya. An estimated 32.3 percent live in urban areas and another 67.7 percent live in rural areas. Kenya’s Ministry of Lands estimates that 50 percent of Kenyans will live in urban areas by the year 2050 (Jones, Gavin and Pravin, 2007). With increased urbanization quality low cost housing remains unavailable for a majority of low income urban dwellers. A few development agencies have however emerged seeking to address the problem of poor urban dwellers. An example is the Jamii Bora Housing Programme which sells high quality but low cost housing to the poor at a cost of Kshs 150,000 for a two-bedroom unit (Hakijamii 2012).

According to the Kajiado Strategic Structure Plan (1999), the adequate provision of housing for the ever-increasing urban population is a necessary input into the orderly and sustainable growth of urban centres. Therefore provision of land for housing and the production of adequate and appropriate housing stock have a direct link to the wellbeing of the town’s inhabitants and the growth of the other sectors of the economy such as industry and commerce. Kajiado town’s population growth rate is estimated at 5.68 per cent annually (Olinger, 2006). This growth rate is creating a high demand for housing (Porteus, 2011). There have been an increase in population as well as in Nairobi county and the housing deficit have not been made even after the initiation by the government coming up with various schemes in different regions. A case in scenario is the slum up grading of Kibera to High rise building in 2010, Langata estate expansion and National housing units at Nyayo high-rise in 2012. There are at least 6956 public housing units within the town, 5434 of which are owned by the Municipal Council of Kajiado and 1522 by central government departments and corporations. The rate of growth in the public housing sector is

minimal. It is estimated that the majority (87%) of Kajiado residents are tenants while a significant 13% own and occupy their own units.

According to UN-HABITAT (2011), the use of alternative building solutions that 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. Local government support: to allow for the effective supply of off-site infrastructure and land servicing (i.e. development of trunk infrastructure, water & sanitation, etc.) needed to support real estate development (United Nation, 2012).

Adequate funding system to facilitate mortgage provision: the banking system is still not in a position to offer the long-term finance that the housing sector needed. Beyond the provision of long-term mortgages, alternative financing schemes such as “lease-town” arrangements in partnership with local financial institutions could be deployed for instance. Local bank capacity building: to strengthen mortgage underwriting skills and instigate competition in the sector. 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. According to the World Bank Report (2012), a key challenge is the banking of those in the informal sector. Equity provision for developers: this will limit excessive debt leveraging of real estate developments. Private equity funds can be an interesting avenue to be pursued. Technical assistance: to both developers and contractors to increase their capacity to deliver housing units in larger quantities so as to benefit from economies of scale.

2.3 Cost and the Provision of Housing

The financial institutions in Kenya offer funds in the hope of making profit and declare dividends for its shareholders because that is the reason why the institutions are in business (Murinda and Silvie, 2008). The high desire to earn quick profits has led to increase in interest rates for borrowers of finance in the institutions and hence it has prevented low-income groups who cannot afford the high interest rates set by the institutions (Kombe, 2005). The local government has the duty to help the poor people who cannot manage to pay the high amounts of

interest requested by financial institutions by providing them with better housing at affordable prices but unfortunately the income collected by institutions in terms of taxes and service charges has not been sufficient to completely solve the housing problem in the urban centres (Wafula Nabutola, 2008).

Financing low-income housing has been deemed a challenge due to several factors that hinder its proper functioning. Several factors have hindered efficient financing for low-income housing. The most notable aspect of financing for low-income housing is the risk of default by the borrower because the low-income groups do not always have a guarantee of constant financing (Tacoli and Cecilia, 2008). These limitations are the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing (Saunders, Lewis and Thornhill, 2008). Research conducted in other countries in the world that have been able to successfully finance low-cost housing such as Angola, Namibia, and South Africa have therefore given an insight in how they have successfully managed to finance the low-cost housing segment and consequently help to reduce the number of informal settlements (The East African 2010). According to Kotler and Armstrong, pricing ensures that a company is paid for the value it creates to its customers and with effective product development, promotion and distribution yields success for an organization (Pervez and Kjell, 2005).

Housing finance companies are in a position to evaluate the financial capability of finance seekers. This enables financial institutions to determine the correct value to be disbursed to a mortgage applicant while considering the interest that will be paid back with the loan. However with the number of low-income households rising, extensive research should be conducted on how to curb this problem. The low-income earners in the society do not have the high income that would be required by the financial institution and this automatically disqualifies those (Kotler & Armstrong, 2008). But housing ownership does not to be in full although can be achieved through different phases of financing toward the same house. The low incomers can be funded short term loans in small amounts which can as well be allocated to housing.

The housing finance sector in Kenya is experiencing challenges of a complicated three-tier market that is served by an elaborate financial system (Ireeri, 2010). At the top of the hierarchy are house-holds that can afford housing of high quality. In the middle category comprises the

middle-income group which is predominantly composed of wage and salaried workers as well as self-employed people (Jones, Gavin and Pravin, 2007).

This category is not adequately catered for in the provision of housing and as a result they are relegated to housing targeted for low-income earners. The third category which forms the majority of households is low-income earners (Hakijamii, 2012). They are the most affected by the housing problems arising from inadequate housing and the displacement caused by insufficient housing facilities for middle-income earners (National housing policy 2004).

The three financial institutions that offer financing and support for the low-income housing segment in Kenya have also to consider certain important issues before setting prices of houses for would-be tenants or those who have the desire to invest in low-cost housing or even in normal mortgage for the wealthy (Clark, 2006). The customer perception of value, meaning the customer should be able to value the service being offered with the price being paid for low-cost housing structures.

The financial set up in the housing market in Kenya as indeed elsewhere is such that those offering funding seek to make a profit and declare dividends for the shareholders because that is what they are in business for (Douglass Mike and John Friedmann, 2008). The money market is expensive due to relatively higher risks that raise interest rates. The exception is the central government and the local authorities who have obligation to provide decent housing for all their citizens (Bruin and Cooks, 2007). Unfortunately for a variety of reasons the revenue collected through taxes and service charges is not sufficient to cover housing needs as there are other priorities. Other strategies have to be devised to address the large and growing gap between what is needed and what is offered (Seedhouse, 2006).

2.4 Infrastructure and the Provision of Housing

In Kenya low-cost housing has not been successful because the stakeholders who have the duty to undertake the projects have complained that the cost of building materials, land and infrastructure is too expensive to be able to support low-cost housing segment. According to Mr. Joe Mungai, the managing director of the Tamarind property developers, the biggest problem to low-cost housing is the lack of infrastructure.

Although the government has encouraged developers to invest in low-cost housing projects with the promise of providing proper infrastructure this has not been the case and most developers and finance institutions have opted to target wealthy households (Sherman and Combs, 2007). The wealthy individuals can finance the mortgages where the infrastructure is good and does not need government involvement because the wealthy individuals in Kenya do not believe that the government will be able to honour its pledge of improving the infrastructure in the urban areas where low-income structures can be built (The east African, 2010).

Another problem affecting infrastructure was lack of water in some urban centres. This was problem that cannot be solved by any financing institutions but the responsibility of the Kenyan government to ensure that supply of water is constant in urban areas; this will in turn attract more investors to put effort to financing low-cost housing (The east African 2010).

Infrastructure such as lack of public transportation system; road infrastructure and existing para-transit system (matatus) offer significant opportunities for efficiency improvements. Poor and inadequate road conditions and lack of modal separation cause high rates of traffic mortality and poor pedestrian safety (The east African 2010).

Improvement of housing for the Kenyan population is a major concern to the Government. This concern has been influenced by the fact that the improvement in housing stock is a strategically important social and economic investment (Porteus, 2011). In addition, well-planned housing and infrastructure of acceptable standards and affordable cost when combined with essential services affords dignity, security and privacy to the individual, the family and the community as a whole (Paul and Maureen, 2002). Adequate shelter also prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements. Besides this social function, housing is also an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force (Olinger, 2006).

Land is a scarce and valuable resource (Nottingham and Liverpool Universities, 2008). Land and land related matters including use, development and control are sensitive issues with deep socio-economic and political impacts. Land holds a special and enviable position of an invaluable economic asset associated with an intricate chain of interests (Saunders and Thornhill, 2009).

Thus, a number of people having recognised the special economic value in land engaged in public land grabbing for speculative purposes. Lack of a comprehensive land use planning and management policy has led to development of substandard settlements with inadequate infrastructure, services and open spaces (Jiboye, 2011).

2.5 Security and the Provision of Housing

The families and communities lack security for the houses provision. Insecurity emanates from the form of land ownership in the form of leasehold and freehold. Some of the landlords do not have title deeds and face the threat of eviction from the central authority. Families also lack security of tenure for a number of reasons; first, they can be forcibly displaced by the State to make way for development projects; second, religion, custom and tradition can be used by private individuals to dispossess a widow or divorced woman of her home and lands; and third, sufficient measures are rarely taken against racist practices by landlords and other actors (Kombe, 2005). Ownership of property outside the slums is a security to poverty especially those with land in the rural areas and has come to the urban areas to work and supplement the income from the rural subsistence farming (Hakijamii, 2012).

The basic and priority needs should be identified: water, housing, electricity and will better disposal as well as access roads so as to reduce the insecurity and enable informal activities develop. Fabbozi and Modigliani (1995) identified several benefits accruing due to securitization of mortgages. Obtaining a lower cost of funds that takes assets and uses them as collateral for a security offering enables lower funding costs to be obtained by the financial institution (Erguden, 2001). By using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution (Douglass Mike and John Friedmann, 2008).

When loans are financed via securitization to a borrower at an expected return lower than the interest rate on the loan, it reflects the fee for servicing the loan and that will partially reflect conversion of the illiquid loan into a liquid security that is more viable for a financial institution growth and performance (Fabbozi and Modigliani 1995). In Gaborone the government has made available a significant amount of public land for residential development. It has done this

through buying large enough areas of farmland from private landowners, on a willing seller/willing buyer basis (Champion, Tony and Charles Watkins, 2001). Plots of public land are allocated with security of tenure, on the basis of fixed-term state grants or formal leasehold. However, the process of land allocation is long, cumbersome and open to favoritism (Archer, Gatzlaff and Ling, 2006).

The bureaucratic system of public land supply is often not transparent and is not understood by most people, especially the urban poor. Contrary to the usual insecurity of tenure in informal settlements, in Maseru customary allocations are routinely recognized in law (Kotler, Armstrong, Wong and Saunder, 2008). Those who access land through informal channels may be able to register their land formally and acquire formal leaseholds. This has encouraged some buyers to invest more in developing their land than would normally be expected in an area of informal settlement. Interventions in the land market need to focus on narrowing the divide between formal and informal markets by bringing poor urban households into the formal market, so that increasing their security of tenure and prospects of investing in the property (National Economic Conference, 2010). Features of informal markets that work well for poor people need to be identified and used to inform aspects of the formal market that create barriers for the poor (Morris and Winter, 2006).

2.6 Technology and the Provision of Housing

The shelter crisis in the developing world is indisputable (Seedhouse, 2006). Housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization. This situation has been shown to be most critical with regard to low-cost housing (Porteus, 2011). Consequently, a number of strategies have been discussed and attempted in order to assuage associated shelter problems. The foremost of these strategies has entailed, inter alia, research, development and demonstration of affordable, easily obtainable and easy-to-use materials for the design and construction of satisfactory low-cost housing (Paul and Maureen, 2002).

While documented research in this area shows promise, actual construction is somewhat dormant. The effects of earth as a material on city form and spatial quality, in particular and urban design, in general, is not documented (Macoloo, 2009). It is these seemingly inherent discrepancies in earth construction for low-cost housing that the study explored. Man's use of

earth construction for shelter is described by several protagonists as ubiquitous (Hoek-Smit, 2011). Earth is, supposedly, a material that is accessible, versatile, easy to use, structurally satisfactory, and affordable the urban poor. It therefore, potentially, performs satisfactorily as a material employed to avail adequate shelter to the peri-urban poor (Douglass and John, 2008).

2.7 Theoretical Framework

This study was based on theory of housing adjustment that was postulated by Morris and Winter in the year 2006. The theory deals with how households think and behave in performing their housing behavior. This theory purports that if a household is below the norms of the society, that household feels dissatisfied and seeks to change its situation. The major components of the theory are housing norms and constraints that affect the household ability to act. When a household recognizes a housing deficit, possible corrective measures to be taken by the household is to move to a different house, do a household adaption whereby the household makes its own changes such as reducing needs and removing constraints (Sherman and Combs, 2007). The theory of household adjustment mainly focuses on relationships among specific variables which may influence a person's job satisfaction and overall life satisfaction. In many cases this theory has been used to study constraints and residential satisfaction among low income earners and single parent families (Bruin and Cook, 2007).

The construction of housing does not exist independently but rather coexists with driving forces, decision, process and pattern (Alnsour, 2006; Kombe, 2005; Tipple, 2000; Fekade, 2000). Understanding cost of housing can be defined by different levels that include: driving forces, decision, process and pattern. Driving forces are the level proven to be the most influential factor of illegal housing on the macro scale. These include social-economic motives. Pattern is the lowest level, which is a directly observable outcome whether vertical or horizontal. Process indicates the space and time dynamics of illegal housing.

There is a set of socio-economic factors that play an important role in determining the cost of housing. These factors include population growth, poverty, income level, urban land prices, finance, urban services and cultural convergence. Each factor has a certain role in influencing illegal construction. Normally, these factors influence illegal housing in different degrees, since

the density and the speed of spread of illegal housing can vary from one place to another and from one time to another. In 1980, the housing shortfall in Nairobi was 60,000 per year, this figure now standing at 150,000 units per year, averaging 410 units per day against a supply of only 30,000 annually (GOK, 2007). This housing shortfall, one of the most common in the region combined with changing demography has placed an increasing emphasis on government to pursue correct policies and improve the capacity of the housing delivery process.

By its nature, real estate represents a major investment requiring a substantial capital outlay and key theme in its provision in the time value concept of money (Nabutola, 2004) in this light, David (2007) suggests that the trigger for development activity in 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 of maximizing profits. Profitability in housing is advocated (Golland, 2006) to be used on time variables.

In a survey of developers, Thalmann (2006) however purports that a few market developers activity monitors the market for business and profit opportunist but instead respond to market triggers, such as availability of land. As such the supply of housing may respond to market and incentives. Increased levels of production and employment levels creates about increase in the economy hence real estate, therefore there will be a higher demand for property both housing and for investment purposes. With more industries, businesses and efficient work force take advantage of the enhanced market for goods and services in the region, the formal linkages in terms of employment and wealth creation are immense. This is bound to have a positive effect on the property market (Small Medium Enterprises Today, March 2011).

The main variables for the study were Independent (cost, infrastructure, security, technology) Moderating (economic growth, land and housing policy), Intervening (saving culture, land grabbing, tastes and preferences) and Dependent Variables (provision of housing), as illustrated in Figure 1:

2.8 Conceptual Framework

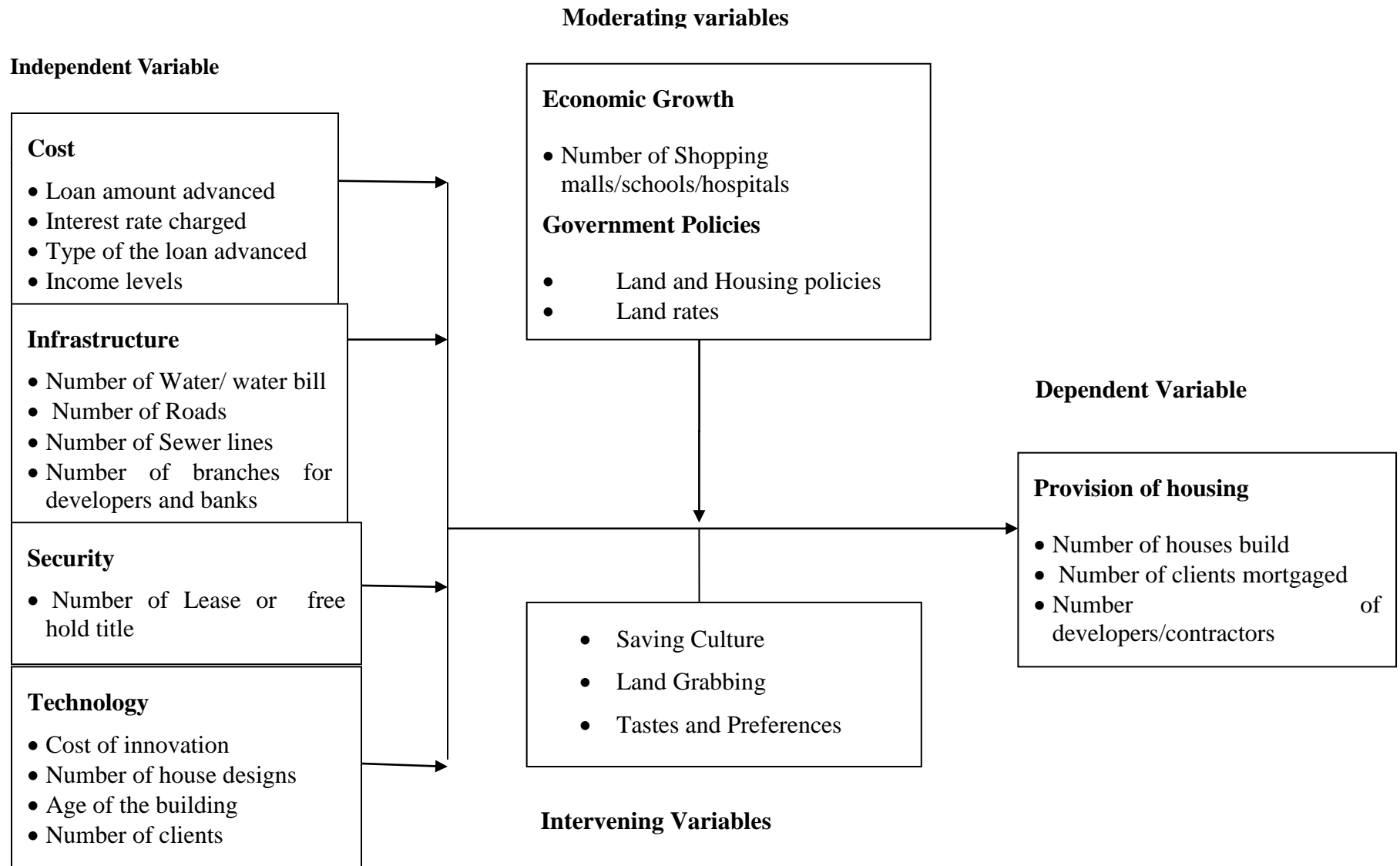


Figure 1: Conceptual Framework

As illustrated in Figure 1, the provision of housing is dependent on the cost, infrastructure, security and technology used. However for people to settle in a respective area, a number of factors are considered before such a decision is taken. The factors are further detailed below:

Cost and provision of housing: Housing is accessible and affordable to all if the cost of construction is much less than the income levels, hence the residents can afford to pay within the prevailing lending rates (Interest Rate, Base lending rates, price of construction inputs, etc).

Infrastructure and provision of housing: People elect to settle within a given area after determining the availability of serviced road and common amenities. Therefore housing mushrooms where there are already roads, water, electricity, schools and hospitals etc. Security and provision of housing: Land tenure is limited in Nairobi where majority of the population do not hold title deeds and if so they are lease hold basis. The lease hold tenure inhibits investment in provision of long-lasting houses, thereby encouraging the proliferation of informal settlements.

Technology and provision of housing: There are other alternative building technology which have not been well received by Kenyans due to a number of factors. The use of conventional brick and mortar building technologies (cement blocks and stones) which is more costly and takes more time has inhibited the shift to these new alternative technologies that would have spurred provision of housing e.g. panels, interlocking blocs.

This conceptual framework therefore presents all the variables, and how they inter-relate within a dynamic setting. In such a setting, the roles and responsibilities of various players clearly set. The role of government, as the regulator and enforcer of public good is important. So too are the roles of the private sector developers and the local citizenry. The Government, as the regulator should come to ascertain there are good plans, supportive tenure, clear land acquisition guidelines, regulated construction, and ample security for provision of housing.

2.9 Knowledge Gap

The gap identified in the empirical literature reviewed is shown in table 2.1:

Table 2.1: Summary of Knowledge Gap

Variable	Author and year	Findings	Knowledge gap
Cost and provision of Housing	Murinda and Silvie, 2008.	<ul style="list-style-type: none"> every four women respondents had suffered at least one form of gender-based abuse: economic, physical or emotional 	<ul style="list-style-type: none"> the study did not focus on house provision
Infrastructure and Provision of Housing	GOK, (2007)	<ul style="list-style-type: none"> Shortage in house supply in Kenya 	<ul style="list-style-type: none"> The study did not use equal representation of the population
Technology and Provision of Housing	Douglas & John 2008	<ul style="list-style-type: none"> Materials employed to avail adequate shelter to the per-urban poor 	<ul style="list-style-type: none"> Study did not measure the number of households done with alternative technology (did not specify actual materials as well)
Security and Provision of Housing	Kombe 2005	<ul style="list-style-type: none"> Families lack security of tenure they can be forcibly displaced by the State to make way for development projects; religion, custom and tradition can be used by private individuals to dispossess a widow or divorced woman of her home and lands; 	<ul style="list-style-type: none"> Being a landlord in an informal setting does not automatically imply that you have proof of ownership of the land

2.10 Summary of Chapter

According to Tacoli and Cecilia (2008), the most notable aspect of financing for low-income housing is the risk of default by the borrower because the low-income groups do not always have a guarantee of constant financing. Saunders, Lewis and Thornhill (2008) adds that these limitations were the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing. According to Porteus (2011), it is a concern that has been influenced by the fact that the improvement in housing stock is a strategically important social and economic investment. In addition, Paul and Maureen (2002) noted that well-planned housing and infrastructure of acceptable standards and affordable cost when combined with essential services affords dignity, security and privacy to the individual, the family and the community as a whole. Further, Olinger (2006) found out that adequate shelter also prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements.

Besides this social function, housing is also an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force. Fabbozi and Modigliani (1995) identified several benefits accruing due to securitization of mortgages. Erguden (2001) adds that obtaining a lower cost of funds that takes assets and uses them as collateral for a security offering enables lower funding costs to be obtained by the financial institution. Douglass Mike and John Friedmann (2008) established that by using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution.

According to Seedhouse, (2006), housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization. This situation has been shown to be most critical with regard to low-cost housing. Consequently, Porteus, (2011) adds that a number of strategies have been discussed and attempted in order to assuage associated shelter problems. The foremost of these strategies has entailed, inter alia, research, development and demonstration of

affordable, easily obtainable and easy-to-use materials for the design and construction of satisfactory low-cost housing.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology that was used to meet the objectives of the study. It discusses the research design, the target population, the sample size and sampling techniques, data collection instruments, validity and reliability of instruments, data collection procedure and data processing and analysis techniques.

3.2 Research Design

The study employed descriptive research design. Descriptive research describes data and characteristics about the population or phenomena being studied. Descriptive research answers the questions who, what, where, when and how (Pervez & Kjell 2005). In context, the research tends to lie more on quantitative approach than on qualitative one. The aspect that views collected was from the players' point of view, their own subjective frames of reference, necessitates a qualitative approach. For the attainment of the objectives, it is essential that the dealers' own subjective perspectives were captured.

3.3 Target Population

The focus of the study was on determining the factors influencing the provision of housing in Nairobi County. The study of the target population for this study was 190 (International Union for Housing Finance, 2010) home owners, mortgage company management officials and bank managers. The study targeted five (5) main banks that were key in the real estate sectors which included, Housing Finance, National Housing Corporation, Kenya Commercial Bank, Jamii Bora Bank and Co-operative Bank. The questionnaire was put up to the three (3) top management in the bank (Head of Mortgages, Operation and Credit). Twenty Six (26) developers who were key players on provision in Nairobi were targeted, two (2) from each company and one hundred and twenty three (123) households within Nairobi County.

3.4 Sample Size and Sampling Procedure

Sampling is a procedure through which some elements were selected from the population to be representative of the others. The basic idea was that by selecting a sample, conclusions can be drawn about the entire population. Stratified random sampling was used to ensure all sub-groups in the study were involved, and then simple random sampling was used to get respondents from each sub-group /category.

3.4.1 Sample Size

In determining the sample size, the study adopted the formula developed by Fisher et al (1991):

$$n = \left\{ \frac{Z^2 x}{d^2} \right\} pq$$

Where:

n= the desired sample size

Z = the standard normal deviation, set at 1.96 which corresponds to 95% confidence

d = Acceptance range of error

p = participating rate in the commercial banks and Real estate companies 11%

q=Non-participating rate in commercial banks and Real estate companies will be 89%

When Population >190,

$$n = \frac{1.96^2 \times 0.11 \times 0.89}{0.05^2}$$

=150.437 which was approximately 150 respondents

150 respondents were selected using proportionate random sampling across all selected commercial banks, Real estate companies and home owners to participate.

Since the targeted population is above 190, the final sample size (n) was calculated using the following formula:

$$n = n \div \{1 + (n/N)\}$$

Where:

n = desired sample size (when target population is greater than 190)

nf= desired sample size (when target population is less than 190)

N = the target population

$$n = 150 \div \{1 + (150/190)\}$$

=83.822 which is approximately 83 respondents

= 83 respondents were selected using proportionate and simple random method across the targeted respondents

Table 3.1: Sample Frame

Cluster/Segment	Target Population	Sample Size
Top management staff	15	6
Developers staff	52	23
Home owners	123	54
Total	190	83

The study used simple sampling technique to identify respondents who to answer the questionnaires sent; this was a chosen means of sampling because it ensured that the researcher was able to identify a random population from a number of employees who work in housing institutions without being biased or pre-selecting a group of respondents. Simple sampling design was the most appropriate sampling procedure to use in the study because this enabled the researcher to provide each person in the total population that was interviewed the opportunity to be included in the final sample (Pervez & Kjell, 2005).

3.5 Data Collection Instruments

This study used a questionnaire as Primary tool of data collection and it was subdivided into five (5) sections that discussed the general information of the respondents and the specific objectives of the study. These include: cost on provision of housing; infrastructure on the provision of housing; security on the provision of housing and technology on the provision of housing. The questionnaire was structured to have open and closed ended questions that were sent to the participants. Telephone interviews were done to enhance the objectives of the study as outlined earlier. The reason for providing the questionnaire was to clarify the answers that have been provided during the interview to improve the credibility of the research.

Direct interviews were performed by way of phone and the closed and open-ended questions were asked, respondents who had agreed to provide information that might be helpful in the study of the topic being researched on provided more knowledge on what is required of them. Information collected through the questionnaires form the main part of the qualitative approach in a research, because it explores in depth the research topic and ensures that the major details that are important to the whole study being conducted have been effectively studied (Chapman, 2005).

3.5.1 Validity of the Instrument

According to Kothari (Kothari, 2004), validity is the degree to which an instrument measures what it is supposed to measure. Therefore, the term refers to the extent to which an instrument asks the right questions in terms of accuracy. The content validity of the research instrument for this study was determined through piloting, where the responses of the subjects were checked against the research objectives. For a research instrument to be considered valid, the content selected and included in the questionnaire must be relevant to the variable being investigated. The researcher performed the pilot test with a randomly selected sample of ten real estate employees who were not included in the final study. Content validity of the instrument was tested using a research expert's opinion, who was the research supervisor. The research expert

independently judged the validity of the items in the questionnaire in relation to research objectives.

3.5.2 Reliability of the Instruments

Reliability of an instrument is the measure of the degree to which a research instrument yields consistent results or data after repeated trials. To test the reliability of the questionnaire as a research instrument, a pilot study was carried out and a Cronbach Alpha Moment Co-efficient computed. This established the extent to which the questionnaire elicits the same responses every time it was administered.

Cronbach's Alpha is given as $\alpha = k \left\{ \frac{1 - \frac{\sum SD^2 i}{k-1}}{SD^2 t} \right\}$

Where:-

k = the number of items,

$\sum SD^2 i$ = the variance of the total instrument

$SD^2 t$ = the variance of individual items

For the instruments to be considered reliable, the acceptable reliability coefficient value of alpha is 0.70.

3.6 Data Collection Procedures

Semi-structured questionnaires were used to collect data at the premises of the participant financial institutions and real estate's using an administered questionnaire. The questions were divided into sections, typically, and within each section, the opening question were followed by some probing. SMEs owners or managers were called to request an appointment for the data collection.

3.7 Data Analysis Techniques

A careful analysis of the completed questionnaires was done to ensure that the collected data was accurate and consistent with other information gathered. Pre-processing of collected data was done through editing to detect errors and omissions and making of corrections where necessary. Qualitative data was analyzed by coding according to variables in the study for efficiency so as to reduce the replies given by respondents to a small number of classes. After completion of coding, the data was classified on the basis of common characteristics and attributes.

The raw data was then assembled and tabulated in form of statistical tables to allow for further analysis. Quantitative data was analyzed through the use of descriptive statistics whereby measures of central tendency for example mean and measures of standard deviation responses were established and the results then presented in form of tables. The output of the analysis was presented. The Statistical Package for Social Sciences (SPSS 21) was used to aid in the statistical analysis of the data.

3.8 Ethical Consideration

The researcher relied on ethical issues as identified by Mugenda and Mugenda (2003), while undertaking this study. The research follows the three principles of ethics which include Respect, beneficence and justice. The participants were informed of the purpose of the study before information is sought from them thus conforming to the principle of voluntary and informed consent. The researcher sought approval from the University and Cooperative Societies management before fieldwork. Honesty, integrity and confidentiality was highly maintained throughout the study.

3.9 Operationalization of Variables

Operationalization of variables allows variables to be expressed in measurable terms. The indicators to be measured for each variable were identified together with the measurement scales.

Table 3.2: Operationalization of Variables

Variables	Indicators	Scale	Data Collection Method	Data Analysis
Cost of housing provision	Low income houses Financial capacity of persons in interest and accessibility of financing for housing provision Number of borrowers	nominal	Questionnaire	Descriptive Statistical Analysis
Infrastructure	Provision of water Available public transportation Resources committed to housing provision	nominal	Questionnaire	Descriptive Statistical Analysis
Security	Land tenure Number of mortgages Number of titles charged to loans in Nairobi Land prices	nominal	Questionnaire	Descriptive Inferential statistics
Technology	House designs Age of the buildings Number of employees in technology company Number of clients	nominal	Questionnaire	Descriptive Statistical Analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter covers data presentation and analysis. The main objective of the study was determine the factors influencing the provision of housing in Kenya. In order to simplify the discussions, the researcher provided tables and figures that summarize the collective reactions and views of the respondents.

4.2 Response Rate

The targeted sample size was 83 participants. Those filled and returned questionnaires were 60 respondents making a response rate of 72.3%. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. This means that the response rate for this study which was established to be 72.3% was excellent and therefore enough for data analysis and interpretation.

Table 4.1: Response Rate

Questionnaires	Frequency	Percent (%)
Response	60	72.3%
Non-response	23	27.7%
Total	83	100%

4.3 Pilot Test Results

To establish validity, the research instrument was given to two experts who were experienced in the area of housing provision in Kenya to evaluate the relevance of each item in the instrument in relation to the objectives. The same were rated on the scale of 1 (very relevant) to 4 (not very relevant). Validity was determined by use of content validity index (CVI). CVI was obtained by adding up the items rated 3 and 4 by the experts and dividing this sum by the total number of items in the questionnaire.

A CVI of 0.747 was obtained. Oso and Onen (2009), state that a validity coefficient of at least 0.70 is acceptable as a valid research hence the adoption of the research instrument as valid for this study. The questionnaires used had Likert scale items that were to be responded to. For reliability analysis Cronbach's alpha was calculated by application of SPSS. The value of the alpha coefficient ranges from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous (that is, questions with two possible answers) and/or multi-point formatted questionnaires or scales (i.e., rating scale: 1 = poor, 5 = excellent).

A higher value shows a more reliable generated scale. Cooper & Schindler (2008) indicated 0.7 to be an acceptable reliability coefficient. The study involved questionnaires from 13 respondents, who were selected to participate in the pilot study. Since, the alpha coefficients were all greater than 0.7, a conclusion was drawn that the instruments had an acceptable reliability coefficient and were appropriate for the study.

Table 4.2: Reliability Results

Variable	Cronbach's Alpha	Items
Cost	0.790	6
Infrastructure	0.770	6
Security	0.780	5
Technology	0.770	5

4.4 Demographic Information

The study sought to establish the demographic information in order to determine the factors that influence the provision of housing in Kenya. The demographic information of the respondents included gender, age and education levels of the respondents and designation of the respondents. The respondents who participated in the pilot study were excluded from the sample population that gave their response for analysis.

4.4.1 Gender of Respondents

The study sought to determine the gender distribution of the respondents. The findings were presented in the table below.

Table 4.3: Gender of Respondents

Gender of respondents	Frequency	Percentage (%)
Male	38	64
Female	22	36
Total	6	100

The study found it paramount to determine the respondents' gender in order to ascertain whether there was gender parity in the positions indicated by the respondents. The findings of the study are as shown in table 4.3 above. According to the analysis it was evident that majority of the respondents were male and this was represented by 64% while 36% were female. It can therefore be deduced that males were the most dominant gender in the sector for housing provision in Kenya.

4.4.2 Age Bracket of Respondents

The table displays demographic information according to the age bracket of respondents.

Table 4.4: Age Bracket of Respondents

Age Bracket	Frequency	Percentage (%)
20-30 years	4	6.7%
31-40 years	22	32.5%
41-50 years	23	37.5%
51-60 years	6	13.3%
60 and above years	5	10%
Total	60	100%

The respondents were required to indicate their age bracket where the study findings indicated that majority (37.5%) indicated that their age bracket was 41 to 50 years; 32.5% indicated that they were 31-40 years of age; 13.3% of the respondents indicated that they were 51-60 years of age; 10% of the respondents were above 60 years of age and 6.7% of the respondents were aged between 20 and 30 years of age. Therefore, the study deduced that the respondents were mature and had rich experience on the factors that influence the provision of housing in Kenya.

4.4.3 Highest Level of Education

The study sought to determine the highest level of education for the respondents. The findings were presented in the table below.

Table 4.5: Highest Level of Education

Highest Level of Education	Frequency	Percentage (%)
Secondary education	0	0
Diploma	13	21
Bachelor's degree	28	47
Master's degree	19	32
Total	60	100

The study sought to find out the respondents highest level of education. The findings of the study are presented in table 4.5. From the findings, majority (47%) had university degrees, hence there were undergraduates. This was closely followed by 32% of the respondents who indicated that they had reached postgraduate studies at masters’ level; while the findings further show that 21% of the respondents had reached diploma level of education. The findings established that there was no respondent at the level of secondary certificate in the housing provision industry. This finding reveals that the respondents were knowledgeable and also had a good background of the factors that influence the provision of housing in Kenya.

4.4.4 Year of Employment

The study sought to determine the year of employment of the respondents. The findings were presented in the table below and the findings discussed thereafter.

Table 4.6: Year of Employment

Year of employment	Frequency	Percentage (%)
5 years back	6	10
6-10 years	12	20
10-15 years	23	37.5
More than 15 years	19	32.5
Total	60	100

The findings of the study are presented in table 4.6. From the findings, majority (37.5%) had been in employment for about 10-15 years; 32.5% indicated that they had been in employment for more than 15 years; 20% indicated that they had been in employment for 6-10 years while 10% of the respondents indicated that they had been in employment from 5 years back. The findings show that the respondents were rich in the experiences on the factors influencing the provision of housing in Kenya.

4.4.5 Respondents Designation

The respondents were required to state their designation in the organization. The response showed that the respondents who were the home owners were from various professions. These included civil servants in the government, business persons, and employees in the private sector, farmers and business owners.

4.5 Descriptive Statistics

4.5.1 Cost

The study sought to determine the influence of cost on the provision of housing in Nairobi County. The overall evaluation that applies to the organization by rating the extent of agreement to which the respondents agree to the given statements. Where

5. Strongly Agree (SA) 4. Agree (A) 3. Neutral (N) 2. Disagree (D) 1. Strongly Disagree (SD)

Table 4.2: Cost

Cost	Mean	Std. Deviation
Quick profits has led to increase in interest rates for borrowers of finance in the institutions	4.42	1.248
The government has a duty to provide affordable housing to those who are unable to pay high interests by financial institutions	4.45	1.151
Local government has the duty to help the poor people who cannot manage to pay the high amounts of interest requested by financial institutions	3.56	0.454
Low-income housing is the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing	3.98	0.142
Pricing ensures that a company is paid for the value it creates to its customers and with effective product development, promotion and distribution yields success for an organization	4.12	1.212
Financial institutions determine the correct value to be disbursed to a mortgage applicant while considering the interest that will be paid back with the loan	4.05	0.965

From the study it was noted that cost influences housing provision. This was indicated by the high mean values calculated through SPSS analysis on cost and finances related statements. The respondents strongly agreed that the government has a duty to provide affordable housing to those who are unable to pay high interests by financial institutions with a mean of 4.45; the respondents strongly agreed that quick profits has led to increase in interest rates for borrowers of finance in the institutions with a mean of 4.42; the respondents were undecided that the local government has the duty to help the poor people who cannot manage to pay the high amounts of interest requested by financial institutions with a mean of 3.56; the respondents agreed that low-income housing is the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing with a mean of 3.98; the respondents agrees that pricing ensures that a company is paid for the value it creates to its customers and with effective product development, promotion and distribution yields success for an organization with a mean of 4.12 and they also agreed that financial institutions determine the correct value to be disbursed to a mortgage applicant while considering the interest that will be paid back with the loan with a mean of 4.05.

The study deduced that financing low-income housing has been deemed a challenge due to several factors that hinder its proper functioning. Several factors have hindered efficient financing for low-income housing. According to Tacoli and Cecilia (2008), the most notable aspect of financing for low-income housing is the risk of default by the borrower because the low-income groups do not always have a guarantee of constant financing. Saunders, Lewis and Thornhill (2008) adds that these limitations are the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing. Research conducted by The Eastern African (2010), in other countries and in the world found out that successfully financing low-cost housing such as Angola, Namibia, and South Africa have therefore given an insight in how they have successfully managed to finance the low-cost housing segment and consequently help to reduce the number of informal settlements.

4.5.2 Infrastructure

The study sought to determine the influence of infrastructure on the provision of housing in Nairobi County. The overall evaluation that applies to the organization by rating the extent of agreement to which the respondents agree to the given statements. Where 5. Strongly Agree (SA) 4. Agree (A) 3. Neutral (N) 2. Disagree (D) 1. Strongly Disagree (SD)

Table 4.3: Infrastructure

Infrastructure	Mean	Std. Deviation
Infrastructure has become too expensive to be able to support low-cost housing segment	4.21	0.984
Water is a major factor affecting infrastructure in urban centres	4.56	1.054
Infrastructure such as lack of public transportation system; road infrastructure and existing para-transit system offer significant opportunities for efficiency improvements.	4.68	1.202
Adequate shelter prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements.	4.02	0.965
Housing is an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force	3.76	0.235
Lack of a comprehensive land use planning and management policy has led to development of substandard settlements with inadequate infrastructure, services and open spaces	4.32	0.985

It was noted that infrastructure influences the housing provision. The respondents agreed that Infrastructure has become too expensive to be able to support low-cost housing segment with a mean of 4.21; the respondents strongly agreed that water is a major factor affecting infrastructure in urban centres with a mean of 4.56; the respondents strongly agreed that infrastructure such as lack of public transportation system; road infrastructure and existing para-transit system offer significant opportunities for efficiency improvements with a mean of 4.68; the respondents

agreed that adequate shelter prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements with a mean of 4.02; the respondents agreed that housing is an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force with a mean of 3.76 while the respondents also agreed that lack of a comprehensive land use planning and management policy has led to development of substandard settlements with inadequate infrastructure, services and open spaces with a mean of 4.32.

The study deduced that improvement of housing for the Kenyan population is a major concern to the Government. According to Porteus (2011), it is a concern that has been influenced by the fact that the improvement in housing stock is a strategically important social and economic investment. In addition, Paul and Maureen (2002) noted that well-planned housing and infrastructure of acceptable standards and affordable cost when combined with essential services affords dignity, security and privacy to the individual, the family and the community as a whole. Further, Olinger (2006) found out that adequate shelter also prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements. Besides this social function, housing is also an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force.

4.5.3 Security

The study sought to determine the influence of security on the provision of housing in Nairobi County. The overall evaluation that applies to the organization by rating the extent of agreement to which the respondents agree to the given statements. Where 5. Strongly Agree (SA) 4. Agree (A) 3. Neutral (N) 2. Disagree (D) 1. Strongly Disagree (SD)

Table 4.4: Security

Security	Mean	Std. Deviation
Insecurity emanates from the form of land ownership in the form of leasehold and freehold	4.01	0.995
By using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution	3.97	0.454
Loans are financed via securitization to a borrower at an expected return lower than the interest rate on the loan	4.11	0.941
Plots of public land are allocated with security of tenure, on the basis of fixed-term state grants or formal leasehold.	3.84	0.847
Interventions in the land market need to focus on narrowing the divide between formal and informal markets by bringing poor urban households into the formal market, so that increasing their security of tenure and prospects of investing in the property	4.23	0.986

The findings established that the respondents agreed that Insecurity emanates from the form of land ownership in the form of leasehold and freehold with a mean of 4.01; the respondents agreed that by using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution with a mean of 3.97; the respondents strongly agreed that loans are financed via securitization to a borrower at an expected return lower than the interest rate on the loan with a mean of 4.11; the respondents agreed that plots of public land are allocated with security of tenure, on the basis of fixed-term state grants or formal leasehold with a mean of 3.84; the respondents strongly agreed that interventions in the land market need to focus on narrowing the divide between formal and informal markets by bringing poor urban households into the formal market, so that increasing their security of tenure and prospects of investing in the property with a mean of 4.23.

The study established that when loans are financed via securitization to a borrower at an expected return lower than the interest rate on the loan, it reflects the fee for servicing the loan and that will partially reflect conversion of the illiquid loan into a liquid security that is more viable for a financial institution growth and performance. Fabbozi and Modigliani (1995) identified several benefits accruing due to securitization of mortgages. Erguden (2001) adds that obtaining a lower cost of funds that takes assets and uses them as collateral for a security offering enables lower funding costs to be obtained by the financial institution. Douglass Mike and John Friedmann (2008) established that by using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution.

4.5.4 Technology

The study sought to determine the influence of technology on the provision of housing Nairobi County. The overall evaluation that applies to the organization by rating the extent of agreement to which the respondents agree to the given statements. Where 5. Strongly Agree (SA) 4. Agree (A) 3. Neutral (N) 2. Disagree (D) 1. Strongly Disagree (SD)

Table 4.5: Technology

Technology	Mean	Std. Deviation
Housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization	4.31	0.354
There is a need to develop more appropriate settlement designs and housing products and to ensure appropriate housing quality	4.03	0.322
Settlement design should be enhanced by including design professionals at planning and project design stages, and design guidelines for designers and regulators to achieve sustainable and environmentally efficient settlements	3.97	0.352
Traditional and alternative building technology should be used where possible	3.64	0.441
A variety of innovative house designs for subsidised houses should be encouraged through incentives	4.35	0.944

The findings on the table above, shows that the respondents agreed that housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization with a mean of 4.31; the respondents agreed that there is a need to develop more appropriate settlement designs and housing products and to ensure appropriate housing quality with a mean of 4.03; the respondents agreed that settlement design should be enhanced by including design professionals at planning and project design stages, and design guidelines for designers and regulators to achieve sustainable and environmentally efficient settlements with a mean of 3.97; the respondents were undecided on traditional and alternative building technology should be used where possible with a mean of 3.64.

4.6 Inferential Statistics

This section presents a discussion of the results of inferential statistics. Correlation analysis was used to measure the strength of the relationship between the independent variables i.e. the relationship between cost, infrastructure, security and technology. Regression analysis established the relative significance of each of the variables on housing provision in Kenya.

4.6.1 Correlation Analysis

The Pearson product-moment correlation coefficient (or Pearson correlation coefficient for short) is a measure of the strength of a linear association between two variables and is denoted by r . The Pearson correlation coefficient, r , can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables.

A value greater than 0.000 indicates a positive association, that is, as the value of one variable increases so does the value of the other variable. A value less than 0.000 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases.

4.6.2 Correlation Coefficient

The table below shows the correlation coefficient matrix of the predictor variables.

Table 4.6: Provision of housing

	Cost	Infrastructure	Security	Technology	Housing Provision
Cost	1.000				
Infrastructure	0.6421 (p=.013)	1.000			
Security	0.7205 (p=.028)	0.6146 (p=.034)	1.000		
Technology	0.4632 (p=.044)	0.5244 (p=.038)	0.6441 (p=.033)	1.000	
Housing provision	0.8163 (p=.021)	0.7682 (p=.011)	0.7612 (p=.019)	0.7241 (p=.024)	1.000

The study in table 4.10, show that all the predictor variables were shown to have a positive association between them at a significant level of 0.05 and hence included in the analysis. There was strong positive relationship between cost and housing provision (correlation coefficient 0.8163); infrastructure and housing provision (correlation coefficient 0.7682); security and housing provision (correlation coefficient 0.7612) and technology and housing provision (correlation coefficient 0.7241).

4.7 Regression Analysis

The following are the results of regression analysis.

4.7.1 Model Summary

Analysis in table 4.11 shows that the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) R^2 equals 0.843 that is, cost, infrastructure, security and technology explains 84.3% of observed change in housing provision. The P- value of 0.000 (Less than 0.05) implies that the regression model is significant at the 95% significance level.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.918(a)	.843	.805	.51038	.854	1.242	4	59	.000

4.7.2 Analysis of Variance (ANOVA)

The researcher sought to compare means using analysis of variance

Table 4.8: Analysis of Variance (ANOVA)

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.652	4	.213	7.560	.000
Residual	15.35	59	.171		
Total	18.64	63			

Predictors: (Constant), cost, infrastructure, security and technology

Dependent Variable: housing provision

ANOVA findings (P- value of 0.00) in the table above shows that there is correlation between the predictors' variables (cost, infrastructure, security and technology) and response variable (housing provision).

4.7.3 Regression Coefficients

The table shows the results of the regression coefficients required to form the multiple regression models.

Table 4.8: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.841	0.134		7.367	0.000
Cost	0.045	0.028	0.158	2.021	0.045
Infrastructure	0.043	0.027	0.101	1.157	0.210
Security	0.039	0.030	0.105	1.194	0.234
Technology	0.034	0.014	0.124	1.214	0.054

From the Regression results in table below, the multiple linear regression model finally appear as

$$Y = 0.841 + 0.045 X_1 + 0.043 X_2 + 0.039 X_3 + 0.034 X_4$$

The multiple linear regression models indicate that all the independent variables have positive coefficient. The regression results above reveal that there is a positive relationship between dependent variable (housing provision) and independent variables (cost, infrastructure, security and technology).

From the findings, one unit change in cost results in 0.045 units increase in housing provision. One unit change in infrastructure results in 0.043 units increase in housing provision; a unit change in security results in 0.039 units increase in housing provision; a unit change in technology results in 0.034 units increase in housing provision.

The t statistics helps in determining the relative importance of each variable in the model. As a guide regarding useful predictors, we look for t values well below -0.5 or above +0.5. In this case, the most important variable as a factor influencing housing provision in Kenya is cost. Other factors are as follows: infrastructure, security and technology.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings from chapter four, and also gives conclusions and recommendations of the study based on the objectives of the study.

5.2: Summary of the Findings

The main objective of the study was to investigate the factors influencing the provision of housing in Kenya. The study specifically focused on the influence of cost on the provision of housing; the influence of infrastructure on the provision of housing; the influence of security on the provision of housing and the influence of technology on the provision of housing. The targeted sample size was 83 participants. Those filled and returned questionnaires were 60 respondents making a response rate of 72.3%. According to Mugenda and Mugenda (1999), the response rate for this study was excellent and therefore enough for data analysis and interpretation.

5.2.1 Influence of Cost on the Provision of Housing

The study sought to determine the influence of cost on the provision of housing in Nairobi County. The overall evaluation that applies to the organization by rating the extent of agreement to which the respondents agree to the given statements. From the study it was noted that cost influenced housing provision. This was indicated by the high mean values calculated through SPSS analysis on cost and finances related statements. The respondents strongly agreed that the government has a duty to provide affordable housing to those who are unable to pay high interests by financial institutions with a mean of 4.45. The study generally noted that most respondents strongly agreed that cost has a significant influence on the provision of housing.

5.2.2 Influence of Infrastructure on the Provision of Housing

The research also sought to establish the influence of infrastructure on the provision of housing in Nairobi County. From the analysis of the findings it was noted that the respondents agreed that

Infrastructure has become too expensive to be able to support low-cost housing segment with a mean of 4.21; the respondents strongly agreed that of the various infrastructural components, water is a major factor affecting situation of housing in urban centres with a mean of 4.56. The high mean values indicated that majority of the respondents agreed that infrastructure had a significant influence on the provision of housing. The small standard deviation indicated uniformity in the responses from the respondents

5.2.3 Influence of Security on the Provision of Housing

The study also sought to establish the influence of security on the provision of housing in Nairobi County. The findings established that the respondents agreed that insecurity emanates from the form of land ownership in the form of leasehold and freehold with a mean of 4.01; the respondents agreed also that by using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution with a mean of 3.97. Thus in summary the respondents agreed on influence of security on the provision of housing in Nairobi County.

5.2.4 Influence of Technology on the Provision of Housing

The study also sought to determine the influence of technology on provision of housing Nairobi County. From the analysis, it was established that housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization with a mean of 4.31; the respondents agreed that there is a need to develop more appropriate settlement designs and housing products and to ensure appropriate housing quality with a mean of 4.03. The respondents thus agreed on the effect of technology on the provision of housing stock.

According to the analysis, there was strong positive relationship between cost and housing provision (correlation coefficient 0.8163); infrastructure and housing provision (correlation coefficient 0.7682); security and housing provision (correlation coefficient 0.7612) and technology and housing provision (correlation coefficient 0.7241). R^2 value calculated of 0.867 indicated that cost, infrastructure, security and technology explains 86.7% of observed change in housing provision.

The multiple linear regression models indicated that all the independent variables had a positive coefficient. The regression results revealed that there was a positive relationship between dependent variable (housing provision) and independent variables (cost, infrastructure, security and technology). The t statistics helped in determining the relative importance of each variable in the model and thus the highest influencer of housing provision was cost followed by infrastructure, security and technology respectively.

5.3 Discussions

From the study it was noted that cost influences housing provision. The study deduced that financing low-income housing has been deemed a challenge due to several factors that hinder its proper functioning. Several factors have hindered efficient financing for low-income housing. According to Tacoli and Cecilia (2008), the most notable aspect of financing for low-income housing is the risk of default by the borrower because the low-income groups do not always have a guarantee of constant financing. Saunders, Lewis and Thornhill (2008) adds that these limitations are the main cause of many financial institutions in Kenya avoiding to venture into the business of financing low-cost housing.

It was noted that infrastructure influences the housing provision. The study deduced that improvement of housing for the Kenyan population is a major concern to the Government. According to Porteus (2011), it is a concern that has been influenced by the fact that the improvement in housing stock is a strategically important social and economic investment. In addition, Paul and Maureen (2002) noted that well-planned housing and infrastructure of acceptable standards and affordable cost when combined with essential services affords dignity, security and privacy to the individual, the family and the community as a whole. Further, Olinger (2006) found out that adequate shelter also prevents social unrest occasioned by depravity and frustrations of people living in slums and informal settlements. Besides this social function, housing is also an investment good contributing both directly and indirectly towards poverty reduction through employment generation, raising of incomes, improved health and increased productivity of the labour force.

The study findings established that insecurity influences the housing provision. The study established that when loans are financed via securitization to a borrower at an expected return

lower than the interest rate on the loan, it reflects the fee for servicing the loan and that will partially reflect conversion of the illiquid loan into a liquid security that is more viable for a financial institution growth and performance. Fabbozi and Modigliani (1995) identified several benefits accruing due to securitization of mortgages. Erguden (2001) adds that obtaining a lower cost of funds that takes assets and uses them as collateral for a security offering enables lower funding costs to be obtained by the financial institution. Douglass Mike and John Friedmann (2008) established that by using mortgage loans as collateral and property structuring as security, a financial institution can obtain a credit rating on the security that is higher than its own credit rating, thus resulting in a lower cost of funds hence more profits for the institution.

The study findings also established that technology influences the housing provision. The study deduced that shelter crisis in the developing world is indisputable. According to Seedhouse, (2006), housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization. This situation has been shown to be most critical with regard to low-cost housing. Consequently, Porteus, (2011) adds that a number of strategies have been discussed and attempted in order to assuage associated shelter problems. The foremost of these strategies has entailed, inter alia, research, development and demonstration of affordable, easily obtainable and easy-to-use materials for the design and construction of satisfactory low-cost housing.

5.4 Conclusion

The study can conclude that housing sector is important and strategic to government and policy makers due to its impact on country's output fluctuations and inflation. The housing industry impacts on the well-being of the people in various ways such as, the size and composition of household wealth, accessibility to credit, labour productivity and employment

The study can conclude that a majority of the respondents agreed that cost influences housing provision. They agreed that the government has a duty to provide affordable housing to those who are unable to pay high interests by financial institutions; quick profits has led to increase in interest rates for borrowers of finance in the institutions and pricing ensures that a company is paid for the value it creates to its customers and with effective product development, promotion and distribution yields success for an organization.

The study concludes that majority of the respondents agreed that infrastructure such as lack of public transportation system; road infrastructure and existing para-transit system offer significant opportunities for efficiency improvements; water is a major factor affecting infrastructure in urban centres and lack of a comprehensive land use planning and management policy has led to development of substandard settlements with inadequate infrastructure, services and open spaces.

The study concludes that majority of the respondents agreed that interventions in the land market need to focus on narrowing the divide between formal and informal markets by bringing poor urban households into the formal market, so that increasing their security of tenure and prospects of investing in the property; loans are financed via securitization to a borrower at an expected return lower than the interest rate on the loan and that insecurity emanates from the form of land ownership in the form of leasehold and freehold.

The study deduced that shelter crisis in the developing world is indisputable. According to Seedhouse, (2006), housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization. This situation has been shown to be most critical with regard to low-cost housing. Consequently, Porteus, (2011) adds that a number of strategies have been discussed and attempted in order to assuage associated shelter problems. The foremost of these strategies has entailed, inter alia, research, development and demonstration of affordable, easily obtainable and easy-to-use materials for the design and construction of satisfactory low-cost housing.

Finally the study concludes that respondents from the study agreed that a variety of innovative house designs for subsidized houses should be encouraged through incentives; housing stocks in towns and cities, in particular, are under considerable pressure from rapid urbanization and there is a need to develop more appropriate settlement designs and housing products and to ensure appropriate housing quality.

5.5 Recommendations

1. Organizations that deal with housing provision should adopt new project management practices to improve on projects delivery, cost saving, improved service to the nation and better organization management.

2. Mohamad (2010) recommends adequate budgets, timely issuing of information, streamlined management structures and efficient legal processes as some of the new project management practices that can be adopted. This can be made possible by the provision of policies that allow for better and more efficient project processes, improved reporting and feedback structures as well as improved stakeholder relationships with an aim of increased performance initiatives for all involved in projects delivery.
3. The study further recommends that the Government must be the enabler, partner, facilitator or and catalyst to create a favorable and maintain enabling environment, for both public and private players' participation that would eventually bring cost of house construction down. The Ministry of Land, Housing and Urban Development needs to implement land reforms and enact laws and regulations that would ensure equity and equitable distribution of land in Nairobi County.
4. The professionals and developers in the housing sector need to embrace and adopt alternative building technologies some of which like Polystyrene Panels has been found to cut material cost by 30% and time by 50% (Moko & Olima, 2014). The National and County Governments need to get involved in providing basic and necessary infrastructure such as water, power, sewerage and roads so that the infrastructure cost is not passed on to the final buyer of the house. On funding the government and developers need to get involved in mobilizing long term and low interest rate funds to bring cost of financing down through initiatives such as mobilizing county's saving through national schemes such as National Social Security Fund and international sourcing of funding through issuing international housing bonds.

5.6 Suggestion for further studies

1. The researcher recommends that more research needs to be carried out on appropriate and applicable Public-Private-Partnership approaches that can be implemented to reduce house construction cost. The researcher also recommends a comparative study on use of alternative building technology and traditional modern technology.

2. A similar study can be conducted to cover more stakeholders such as house developers, construction sector professionals and ministry of housing as the respondents with a comparative analysis of their views.
3. More research to be conducted in other main towns in Kenya (Nakuru, Mombasa, Eldoret, Thika and Kisumu) for comparison with Nairobi findings on factors affecting provision of housing.

5.6 Contribution to body of knowledge

Unlike many previous studies in this area, this study has looked at the wholesome picture of how cost, security, technology and access to infrastructure affect the provision of housing in a rapidly expanding urban area. The study has been successful in capturing the intrinsic inter-play between these four important factors in housing, and prioritised their importance to residents when making that all important decision of where and how to settle. The role of the banks in provision of financing as a factor of enhancing provision of housing has also been greatly delved in under this study. It is now recognized that financial institutions also have an important role to play in the provision of housing, and therefore, government and other players must move with speed to ensure these banking institutions are supported through enactment of the requisite regulatory frameworks. In addition, the reduction of the base lending rates by the regulator, would go a long way in providing cheaper credit for investment, therefore reducing the cost of housing. Finally, the lack of security which has been greatly hindering a majority of Kenyans from accessing credit have been resolved, through the adoption of private public partnerships, which invest in large scale housing projects that unlock the housing potential in un-developed areas.

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APPENDIX I: LETTER OF TRANSMITTAL OF DATA COLLECTION INSTRUMENTS

Salome Temba
University of Nairobi
P.O Box 30197
Nairobi.

Dear Respondent,

REF: REQUEST TO PARTICIPATE IN DATA COLLECTION

I am a MA student at the University of Nairobi. To complete the MA, I am conducting a project planning and management project titled **factors influencing the provision of housing in Kenya: a case of Nairobi county** in partial fulfillment of the requirement for the award of Master of Arts in Project Planning and Management. The enclosed questionnaire seeks to obtain information on the factors influencing the provision of housing in Nairobi County. I would appreciate your completing the questionnaire and returning it in the self-addressed envelope at your earliest convenience. It will only take a few minutes of your time to answer the questions and you might find it an interesting experience. Your answers will be treated as strictly confidential and purely for academic purpose.

Thank you in advance for your time and effort.

Yours sincerely

Salome Temba

