THE EFFECT OF PRICING ON THE DEMAND OF HIGH – END HOUSES IN NAIROBI COUNTY

BY

DENIS NJOROGE TATUA

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI.

NOVEMBER 2016

DECLARATION

I hereby declare that this research project is my original work and has not been presented for an award of a degree at the University of Nairobi or any other institution.

Signed………………………… Date………………………….

DENIS NJOROGE TATUA

D63/64344/2013

This research project has been submitted for examination with my approval as the University Supervisor

Signed………………………. Date……………………………..

HERICK ONDIGO

Lecturer

Department of Finance and Accounting, School of business,

University of Nairobi.

ACKNOWLEDGEMENTS

I am grateful to God Almighty for his gift of life and wisdom during the entire period of pursuing my studies and conducting this research project.

I wish to acknowledge the great support and guidance accorded to me from my supervisor Mr. Herick Ondigo. He committed his time and devotion to scrutinize this project. His guidance and constructive criticism have greatly influenced this research project.

I am eternally grateful to my parents for the support I received from them and also to all my friends who encouraged me throughout this project.

DEDICATION

This research project is dedicated to my parents William and Jane Tatua who have been instrumental in encouraging me to complete this thesis.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

CBK – Central Bank of Kenya

GDP – Gross Domestic Product

HPI – Hass Property Index

KNBS – Kenya National Bureau of Statistics

KPDA – Kenya Property Developers Association

KShs. **–** Kenya Shillings

PED – Price Elasticity of Demand

SMEs – Small and Medium sized Enterprises

SPSS – Statistical Package for Social Sciences

UK – United Kingdom

UN – United Nations

USA – United States of America

ABSTRACT

Owning a home is an important part of an individual's life, not only because it provides shelter to an individual and his family but also it gives the individual a sense of accomplishment and pride for his labour. The housing sector in Kenya according to UN Habitat survey and Kenya Vision 2030 is faced with a demand of 150,000 housing units per year but only 35,000 housing units are delivered in the market annually. The shortage has caused developers to focus on issuing houses but only to the segment of the market with the highest return which is the high – end side, where prices continue to go up without regard to the demand. This research's main goal was to determine the effect of pricing on the demand of high – end houses in Nairobi County. The research adopted a descriptive approach so as to be able to give a description of the state of the affairs as they exist. The target population was the 78 real estate firms registered and based in Nairobi, however, the researcher used random sampling to select the firms which were to be sampled for the research. The research found out that price, even for the high – end residential market, has a negative correlation with the demand, such that high prices tended to decrease the demand. The research also found that the improved economic situation of the country helped in increasing the demand for houses and also for the increasing house prices. Furthermore, the study also found that the improving interest rate regime in the country is also helping drive up the demand and also at the same time the prices of the houses in the high – end segment of the County. However, the research concluded that the continuous exponential rise in prices of the residential houses had contributed to reduction in marketability of the houses. The research therefore recommends government intervention through the enactment of policies, rules and regulations to guide on pricing of residential houses so as to maintain affordability to all. The government should pursue policies that improve the economic health of the country as this increases affordability of many individuals.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Owning a home has been and still is considered an important goal for most people especially those who are looking to settle down and start a family. In addition to providing shelter, many view home ownership as an important investment vehicle that is important for personal wealth accumulation (Brueggeman & Fisher, 2011). As our economy continues to develop, the housing sector is starting to evolve and driving growth in the economy to the extent that many institutions are developing to support this sector for instance financial institutions whose primary goal is to provide finance to the buyers in this market, developers and builders, real estate agents, consumption of insurance to protect household goods is also on the rise and many other service providers.

In Nairobi County, the demand for housing is high and most of the would be home owners don't want to live in just any area in Nairobi, their preference is skewed towards the high end regions of the county for instance in places like Westlands, Lavington, South C etc. This has seen the property prices in such high end estates sky rocket to levels never experienced before. Making would be buyers to be rendered either to build for themselves or to become renters.

1.1.2 Pricing

According to economists, the value or price of an asset or product needs to be determined by the free forces of the market, more specifically by the theory of supply and demand. Price theory states that the best market price for any product or service is the point at which the benefit gained from those who demand the entity meet the seller’s marginal cost, that is, market price reflects interaction between supply and demand. Thus an appraisal needs to be done to identify the price of the property in relation to the factors that affect demand and supply. The main purpose of the appraisal is to establish a market price, usually meaning the price at a consumer will be fine to pay for a property which has been subjected to competitive market conditions.

To produce an estimate of value, the appraiser generally begins by examining the national, regional, and local economic conditions, paying particular attention to income, population, employment and interest rate trends, this are some of the factors that will prop demand for the property in question. Supply is examined by assessing the relative cost of land and the factors of production (wages, Capital). Current market balance in the housing market is then considered by examining the current available stock of housing units, the rates at which they are taken up, rental vacancies, and trends in the rental charge to gauge the chances of any short-run price movement that may affect the value to be estimated. Finally, the appraiser must identify the area relevant location, or submarket in which the property being valued is viewed as being competitive or substitutable with other properties.

This submarket also may be thought of as a neighborhood because of the proximity of retail, educational, religious and other facilities which may appeal to households with similar income, tastes, and preferences. This is important because price and other data will be obtained on properties that have sold recently in this area. Submarket selection is very important as the appraiser seeks to eliminate any differences that could be attributable to school districts, police and fire services, libraries and so on. (Brueggeman and Fisher, 2011).

When it comes to factors affecting demand side, factors such as population growth, household formations, employment, household income, interest rates etc. need to be factored in (These factors will be analyzed in greater detail). However, there are factors that affect the demand side that also affect the supply side for instance interest rates. This is because interest rate affect cost of borrowing which will affect the cost of construction and this will eventually be factored in the house price. When it comes to high end housing prices, the correlation between supply of housing and price is most of the time assumed to be positive, with higher prices encouraging supply. When house prices go up, it encourages investors to construct more housing, and current home owners are encouraged to sell. Construction costs also affect the supply of houses in that high charges on items, land permits and construction permits affect the supply schedule and also affecting the pricing of these houses. For instance, recently the Nairobi county government has increased land rates and the fee for a construction permit has gone up by a multiple of between 200 and 1250, that is, it has gone from accounting for about 0.006 percent of the cost to construct to 1.25 percent of the same costs. (KPDA, 2014)

To ensure that a house is properly priced, homebuyers are enlisting the services of an appraiser to ensure that they don't overpay for a property and also banks have an interest in ensuring that the price is high enough to repay any residual loan balance in the event of a default. In essence they are trying to establish a value for the house in a competitive market, normally this means the price that would be paid for a property under competitive market conditions (Brueggeman & Fisher, 2011).

There are normally three methods used to pricing of households, first is the sales comparison approach which involves selecting comparable homes and arriving at a value. Secondly, cost approach which entails coming up with the cost to produce the structure minus the depreciation, then adding the price paid for the piece of land to arrive at a price, and finally the income approach whereby the value is arrived at by looking at what comparable houses are being rented at and this is done by establishing the ratio of selling price and renting income of such recently sold comparable properties.

1.1.3 Demand for Houses

Aggregate demand is the total demand for goods and services in an economy at a given price at a given point in time. Higher prices decrease the demand for any good or service as they decrease the purchasing power of disposable income and vice versa (Baumol & Blinder, 2011). In recent years there has been a growing population in Nairobi especially as people move from rural areas to come and find employment, according to KNBS 2010, the population increased from 2,143,254 in 1999 to 3,138,369 in 2009, this has created a situation where low end portion of market that is characterized by a high number of people living per square kilometer has had a negative effect on the resources in those regions which are being stretched to the limits in terms of infrastructure and social amenities, for instance things such as sewerage facilities are overburdened to the extent that they bust and start spilling their contents to the surface, with the huge number of people there is a lot of noise pollution from cars, public vehicles etc.

Social trends have also tended to add to the increase of households. These include marriages occurring later than anticipated, the growing number of people breaking up, and the increasing number of people living solitude lives. These factors in turn lead to a demand for separate or individual housing units, (Brueggeman & Fisher, 2011). This, in turn, has reduced "housing turnover," or the inventory of existing housing units that would otherwise be available to younger household groups. (Brueggeman & Fisher, 2011).

With the growth of the Kenyan economy, more and more people are finding opportunities for employment and the wages are also steadily increasing. With the entry of more international firms and non-governmental organizations, which pay attractive salaries to its employees, many people are finding themselves with more disposable incomes and hence most move to high end houses to reflect the change in their status. Also some of these organizations bring their own expatriates to the country and house these individuals in areas perceived to have good security and in most cases these areas are to be found where the high end houses are located thereby driving demand for these houses from such multinationals. There has also been an increase in employment in the informal sector what is referred to as the juacali sector and the small and medium sized businesses (SMEs). Also the gradual fall of interest rates can be seen to be contributing towards the increased demand.

The housing market especially the high – end portion of the market is generally considered to be an attractive investment opportunity for investors to invest in, this is subject to investor confidence. For the investor to put his money anywhere, it is important for them to have some reasonable assurance in order for them to take the risk of undertaking a costly investment in property, in essence how they view the housing market is important; if the investors fear house prices could fall, they will defer buying and vice versa, however in Nairobi county's high end housing, prices have generally gone up over the past few years, for instance according to Hassconsult price index (2014) the price for a house in places like Kileleshwa has gone up from KShs. 7.1 million in December 2000 to 25.6 million in September 2014, this has seen a growing demand for such houses where investors seek to buy and then rent them out to receive rental income or some buy and wait for prices to go up and resell, that is, they buy them for speculative purposes. According to a research done by HassConsult Property Group in 2014, 56 percent acquire a detached house to let it out , 75 percent of those who buy high end apartments do so to rent it out, while 16 percent purchase them for capital gains and a mere 9 percent purchase to occupy it. The lower inflation can also be considered as a factor contributing to the increased demand in high end houses, but this is only to the extent that there are significant savings being derived by households as a result of the lower inflation.

1.1.4 Effect of Pricing on Demand for Houses

According to standard assumptions from the world of economics, they indicate that demand is usually price sensitive in the long run than in the short run, this is because in the long run people have the ability to adjust for fixed variables. This means the number of houses that consumers will buy at all different prices in a particular time.

When looking at the effects of pricing on demand for housing, we need to look first at the concept of the demand curve. In economic theory, the demand curve assumes that the quantity that is demanded by consumers varies with price along a downward slope – this is in essence saying that as prices tend to increase for a certain product, the quantity demanded by consumers falls. And vice – versa.

Market equilibrium comes about when the demand and supply curve intersect, and it is at this point in which the quantity demanded will be equal to the quantity the supplied. When a market is equilibrium, movements known as shifts in either supply or demand will change prices either higher or lower depending on the shift. It is assumed that a rational consumer is one who will try to get the best deal for a house he or she wants at the set budget constraints, the rule for efficient consumer behavior, i.e. for choosing the combination of goods that would yield the highest level of utility from a given budget is that the budget is allocated so that the last dollar spent on each good yields the same utility (Lumsden, 2003).

When it comes to look at the relationship between pricing and demand for housing, the rule of demand apply to some extent such that higher prices will lead to a decline in the demand for housing, there are two reasons which have been forwarded to support this, firstly, people feel poorer, that is, the purchasing power is low or worse off, when the incomes of consumers rise, they will be willing to commit more of their income to buy a house. Often they prefer to buy a house with higher price and quality. For the consumers who have lower income, they will not be able to buy a pricey house with their money this is what is referred to as the income effect of a price rise. Secondly the good will now be dearer relatively to other types of homeownership for instance renting, that is, when the price of a product rises, the quantity demanded will fall. People do not want to buy more and they will switch away from wanting to buy a house and prefer renting, a situation referred to as the substitution effect of a price increase.

1.1.5 High – End Houses in Nairobi County

The residential high end market in Nairobi has in the last 10 or so years thrived to an all-time high. In 2010 Nairobi recorded the highest growth in luxury house prices at least in Africa. A study by Knight Frank found that prices for real estate jumped by 25 percent in 2011. In the high end of the residential market, according to the quarter one report of the HassConsult property index, prices have risen by at least 3.44 times since 2000, the average price for real estate has gone up from 7.1M in December 2000 to 24.6M, and the average charge for rent has gone up from KShs. 38,516 in December 2000 to Kshs. 123, 197 in March 2014.

According to research done by the KPDA (2014), the population in Nairobi County is expected to reach 5M people by 2020, sales and values for rents rose most in Upperhill, South C & South B and were most stable in Lavington. Kenya's real estate is seen to robust and giving superior results compared to other places globally. Current developments are now reaching saturation levels in other areas too, the report found, with building densities rising – with more units per plot – and the opportunity to find unused spaces in the City has gone down drastically. In Kilimani, which was considered as an increasing developing suburbs in 2013, the report found just 12 empty spaces only remained unoccupied, this is in sharp contrast with the 470 in the more rigid area of Runda. The areas where focus of development has shifted to are Kilimani, Kileleshwa, South B and Embakasi, but because land is quickly diminishing, is causing attention to shift to other areas with more space to develop development offers big opportunities for property developers.

The HassConsult (2014) full year report clearly shows that at the top end of the market Nyari Estate continued to represent a hotspot of sales and rental price growth, with rents for 3 to 4 bedroom houses rising by 13.9 percent over the last year, to an average rent of Kshs. 308,000 a month while rents for detached houses in Gigiri rose 10 percent over the year, to 314,000 a month.

Sales prices also rose strongly on detached houses in Nyari estate, up 9.5 percent to just over Shs. 80M, followed by houses in Lower Kabete, at Shs. 76M and Kitisuru at Shs. 72M, prices for town houses rose strongly in Kilimani and Lavington, by 17.8 percent and 19.3 percent while rents for town houses rose strongly in South C and Kilimani, ny 25.9 percent and 21.2 percent. Overall, the high end housing market looks to be robust and prices seem to be ever increasing, coupled with the fact that the government is looking to increase housing in the metropolitan city, for instance, in 2008 the Ministry of Nairobi Metropolitan Development came up with an estimation that the middleclass housing shortage in the city would reach a shortfall of 1.6M by 2030. This led to the setting of targets for 200,000 builds a year. (HassConsult 2014), more and more people are preferring to buy their homes or build their homes in a neighborhood that is relatively located in a safe area the so called high end neighborhoods.

1.2 Research Problem

According to the UN, shelter is one of the basic needs of human beings, such that owning a home is of great importance to individuals. The concept of pricing and housing is very important especially in Nairobi as it forms a large portion of the consumer's budget. A home has become somewhat of a social currency, with this mentality the demand for high end housing has sky rocketed. This has led to an increase in demand without the requisite increase in supply.

According to the law of demand the higher the price the lower the demand and vice – versa, when it comes to the high end houses in Nairobi County however, this rational does not seem to hold as you find that the higher the prices of these houses the higher the demand. This is unique to the high end houses because according to a recent report by Knight Frank (2015), they found that the supply of high end houses has actually outstripped demand, transactions rate in the sector have also gone down and yet prices continue to go up significantly, raising the question what then is really making the prices go up?

Several studies have been conducted in Kenya on real estate prices especially for the residential market. Kariuki (2012) explains that since the year 2002 Kenyan high – end houisng has been experiencing a rapid increase, hence confusing buyers. While global property market in the world decreased, the Kenyan situation was robust. The most up to date findings by the research groups such as Knight Frank and Citi Private Wealth appear to anticipate better time ahead. Kenya's high economic growth and a growing business environment are some of the reasons being theorized for this situation (Julie, 2012). As the other global cities are experiencing low prices on residential property, Kenya seems to be faced by very high prices on residential property (Kinyua, 2014).

A recent study by HassConsult in partnership with the property show carried out research on home ownership, in that research they found out that a surge in buying by institutions and couples, with institutions accounting for 11.9 percent of property purchases by 2012, compared with 6.3% four years earlier. There is also a trend of buying by couples, as opposed to the norm where it was men alone, with the proportion of properties bought by couples climbing to 19.5 percent from 4.7 percent in 2007/2008. According to Muthoni (2014), she noted that mortgage rates are inconveniencing would be buyers by being too high to the extent that only those with quite a healthy salary only can afford. This study therefore did not really give an insight as to whether there is a slowdown in demand of high end housing or not. The HassConsult Property Price Index and the HassConsult Letting Index provide the latest study on house prices and rents in Nairobi housing market. The studies however, focus more on the house prices and trends and their percentage change. They do not reflect whether the changes are brought about by corresponding changes in demand or whether it’s just speculation.

According to Otieno (2014), he observed that the latest surveys of the property market showed that wealthy customers mostly diplomats, expatriates etc. are beginning to shy away from the high end residential market meaning that the demand for high end houses may be dwindling. However, he stated that terror threats may be the reason why he did not look to what extent the decisions of these individuals is being influenced by the pricing of these houses. According to Manson (2014), average prices in Nairobi’s residential market reached historic highs in the first quarter of the year, almost three-and-a-half times higher than 2000, for instance an acre of land in Muthaiga is selling for around KShs. 140Million to 200Million.

The study will thus address the knowledge gap of why houses, a normal good therefore subject to the law of demand, does not seem to follow the law and give an insight as to whether this high prices are a result of increase in demand or other factors are at play. The research will answer the question what is the effect of pricing on the demand of high – end houses in Nairobi County?

1.3 Objective of the Study

To determine the effect of pricing on the demand of high end houses in Nairobi County.

1.4 Value of the Study

Findings of this study will add to the body of existing knowledge that is currently in the field of residential property prices more specifically the high end housing market and also form a basis in which other researchers can conduct further research. This study will be useful to investor, speculators, financial analysts in terms of providing a current picture of the relation between residential housing prices and the demand for such houses and also reveal the trend in the current demand for these houses.

It may also be useful to lenders who would want to ascertain the prices of these houses in relation to demand when making the decisions about the value of the mortgages given people looking to buy homes in the high end market. The findings may also be used by governments more specifically CBK in the formulation and development of policies. CBK can be able to foresee whether indeed there is a bubble in the market and take appropriate action to correct it or to try and cushion the economy in the eventual bust of that bubble.

CHAPTER TWO

LITEREATURE REVIEW

2.1 Introduction

This chapter looks at the trends relating to the research topic in discussion, theoretical discussion and the empirical studies on the impact pricing has on the demand of high – end housing market and literature that connects to this research.

2.2 Theoretical Review

A couple of theories have been forged on housing prices (sometimes put under the heading real estate) and demand.

2.2.1 Price Elasticity of Demand Theory

Demand is defined as the quantity of a particular good that an individual buys in any given time period, thus, the demand curve does not describe an event, i.e. it does not tell us how much of a good an individual actually bought; it is a hypothetical relationship concerning what our individual would be prepared to buy at each price, in a given time period. (Lumsden, 2003). Price elasticity of demand (PED) is a "measure used to show the responsiveness of the quantity demanded of a good or service to a change in its price, ceteris paribus (i.e. holding constant all the other determinants of demand, such as income) and was developed by Alfred Marshall in 1890". In more open terms, it provides the percentage change in quantity demanded in reaction to a one percent change in price. This also affects the total expenditure on say, the number of houses bought.

For a normal good, the price elasticity of demand will be negative as per the law of demand but it is normal to ignore the negative sign. However, some goods do not experience such a negative PED for instance giffen or ostentatious goods which have a positive PED.

There are three possible classifications of PED namely, price inelasticity, price elasticity, unitary price elasticity. “Price inelasticity of a good is when, as price changes, the proportional change in quantity demanded is less than the proportional change in price,” that is, when a good is price inelastic, a price increase will lead to more of the product being consumed and a decrease in price will lead to a reduction in the amount of the product consumed (Lumsden, 2003). A good is considered to be price elastic if “the proportional change in the quantity demanded is greater than the proportional change in price”, that is, when prices go up, it results in a fall in the consumption of the product and when prices decrease, purchases of the product goes up (Lumsden, 2003). Finally, a good is classified as being unitary elastic if “as price changes, the proportional change in quantity demanded exactly equals the proportional change in price” (Lumsden, 2003).

2.2.2 Price Theory

According to Weber (2010), price theory is primarily aiming to explain economic activity with particular attention to the creation and transfer of value, which includes the trade of goods and services between participants in the economy. Walras (1877) tries to connect the idea of price to the value of an object in an exchange economy by noting that the price of a good will go up provided there is an excess demand, while it reduces when there is excess supply.

A key result of price theory is that Walrasian equilibria, even though merely defined as a solution to individual utility maximization problems and a feasibility constraint (supply = demand), produce pareto efficient outcomes.

2.2.3 Game Theory

"Game theory is the study of interacting decision makers, it emphasizes a study of cold – blooded 'rational' decision making, since this is felt to be the most appropriate model for most economic behavior" (Varian, 2004). The theory was developed by many scholars in the 1950s however Jean Tirole is credited with coming up with the theory.

"It is assumed that the game is defined, that is, there are a set of players, a set of strategies, the choices that each player can make and a set of payoffs indicating each player receives if a particular combination of strategies are chosen" (Varian, 2004). Each player is assumed to be fully rational, that is, each player chooses an action that maximizes his utility given his own beliefs and that those beliefs are modified when new information arrives according to Bayes' law. In essence the decision making of players is always interdependent.

There have been several attempts by scholars to use game theory in explaining the housing market for instance, Zhenguo and Li (2006) using game theory revealed that it's individuals' rational behaviors that resulted in the arising, transmission and burst of bubbles in the China real estate market. Another study, this time by Yuabin (2006) found the price game between consumers and speculative investors are one of the reasons there is high pricing in houses in China.

2.3 Empirical Literature Review

Several studies have been conducted to look at the effect pricing has on the demand for housing and although some have been done to look at the effect pricing has on mortgages, we shall also consider those studies as mortgage also affect the demand for housing.

2.3.1 International Evidence

Ballesteros (2002) in his study of "the dynamics of housing demand in the Philippines" examined two key issues in his research, "*first how housing demand is associated with income and demographic changes and finally does the housing consumption pattern of households suggest the presence of significant housing market imperfections*." He found that although income is a key determinant in the demand for housing, there are other determinants for instance lifecycle, house prices and financing that also do affect demand. He also noted that the main reason why housing prices seem to escalate in the Philippines was due to escalating land prices.

Research by Davenport (2003) on "*the effect of supply and demand factors on the affordability of rental housing*" found that when incomes for the highly skilled workers increases so does the average total incomes, this in turn induces construction of houses predominantly in the high end segment of the housing market. He found out that as incomes go up and the number of households that are burdened by daily costs come down leading to increases in units available for renting which in turn led to a decrease in rent charged. Therefore, according to his research is the main factor in finding out if people can afford housing.

According to research by Case and Shiller (2004) in their study on the US housing bubble, they observed that people's anticipation of large increases in the prices of houses especially if they have no reason to expect a fall will have an effect on demand since on their view the risk associated with owning a house are minimal. If thus the perceived rise in prices stops then the house prices will tumble down as a result of diminished demand. This ultimately means according to the two, that people's emotions especially those of not wanting to be left behind does affect people's perception of judging risks associated with owning a house and this leads to an artificial increase in demand.

According to Simonsohn and Loewenstein (2006), they analyzed "*the impact of previous prices on home buyers' behavior and demand for various houses in the US,*" the research found that people do attach importance to the price that was paid initially for real estate and this price will determine how they will be willing to pay for the same property. They found that in the short run the changes in price have a much stronger effect on people both directly and indirectly through "the contrast effect with previous prices." When it comes to the long term view however, people are not that sensitive to past prices and become accustomed to having new prices.

According to research done by Benito, Thompson, Waldron, and Wood (2006) carried out in England, they found that when people anticipate to be making a lot more money in the future, it encourages them to plan to spend more thereby increasing their consumption of more goods and also their demand four housing goes up.. Stepanyan, Poghosyan & Bibolov (2010) undertook an analysis of "*the determinants of house prices in selected former soviet countries*" and found that fundamentals such as GDP and external financing are important factors in determining house prices. The study also revealed that "house prices adjust to long-run equilibrium in response to shocks and correction seems to be rather steady."

According to research done by Kuenzel and Bjornbak (2008), they noted that prices for the UK housing market have been steadily increasing since 1997 driven by some factors that affect demand for instance the steadily increasing of incomes and fall in the rates being charged for mortgages. According to the research they found that in the short run housing supply is considered to be fixed and therefore only the demand will affect house prices. They found that in the UK for the period 1997 to 2007 the main cause for increased house prices was the rise in demand which was mainly attributed to changes in the adult population or the easiness of being able to form a household. They also found that a steady increase in incomes in the years up to 2004 and a reduction in the rates of mortgages gave households a greater ability to pay for housing as well as people's ability to secure a bigger mortgage for a certain income. All this accompanied by the fact that credit requirements were not strictly adhered to and a preference bias towards homeownership increased the demand, all these contributed to house prices in the UK to shoot up by 20 percent to 40 percent.

According to a study done by Han (2011) to "*determine the effects of price risk on housing demand.*" He found that people guard against the possibility of running short of finances and therefore may not priorities buying a house leading to a decrease in demand and in trying to manage risks, they may however, try to purchase a house now if they view it save from having to pay higher prices in the future. In a constantly changing housing market, for buying a house to be considered as risky depends on whether the person buying is doing so to prevent paying higher future prices. His findings also suggest that "families in incomplete housing markets rely on private self-hedging mechanisms to reduce house price risk."

According to a study done by Peterson and Zheng (2012), they conducted a research to "*examine the medium term house price fluctuations in Canada and the reasons for the fluctuation*." They found that various factors for instance population shifts, increasing disposable incomes, decreasing interest rates etc. have a primary importance in determining the housing prices more predominantly over the medium term. The steady increase of the size of the population and also rising of disposable incomes tends to generate a persistent increase in demand for housing. According to them demand for housing may go up because of long - run increase of the population and incomes, however, there may be other factors involved. In the short – run, factors such as changing interest rates and credit conditions may influence housing demand and as a result medium term increases in house prices may be more than long – run increases.

A study done by Chen, Chang, Yang, and Hsieh (2012) on the "*relationship between investment demand and house prices on an emerging economy*" focusing specifically on Taiwan in which they used a threshold model for the purpose of conclusively showing that the money that is supplied in the economy as a key threshold determinant. They found that when an economy expands, it leads to an expansion in the "real money" and thus causes house prices to increase. They found that "*when the real money supply growth rate is below the threshold value,*" the number of households, supply of housing and the rate of inflation have an important effect on the growth rate of house prices. When the growth of money circulating in the economy is high, securities prices and the rate of inflation appear to be influential.

According to research done by Conefrey and Whelan (2012) to "*ascertain the supply, demand and prices in the US housing market,*" they found if you try and bring about a 1% shock to housing price, the result is an increase in the demand for housing contrary to standard economics theory of higher prices leads to a lower demand. They further went on to try and introduce a 1 percent shock to the demand and found out that factors such as sales and prices actually rose. They also found that a 1% increase in other factors such as real mortgage interest rate causes the house prices to fall and also a fall in the sales.

According to Basten and Koch (2014) they carried out a study looking at *"the effect of house price on demand of mortgage and supply in Switzerland."* In the study they found out that contrary to what maybe anticipated, when house prices are up, the amount of mortgage to be taken goes up and this results in banks having to approve less applications and increase interest rates and this is more so during the boom years. The high prices actually do not encourage banks to increase the amount that is available for mortgages and lenders tend to offer fewer mortgages at an increased premium for the highly priced houses. They finally came to the conclusion that higher housing prices and herefore perceived as collaterals of a better value do not encourage banks to lend out more money or even lower their rates.

2.3.2 Local Evidence

Omboi (2011) carried out a study on "*the factors influencing real estate prices in Meru Municipality.*" He found that the main factors that affected housing prices in Meru county included income, which accounted for more than 70 per cent of the changes in the prices while demand accounted for almost 20 per cent while factors such as location and realtors and brokers were found to be insignificant.

According to a study done by Ochuodho (2011), he carried out a study "*to find out the relationship between real estate prices and the economic fundamentals of residential houses in Nairobi County*." He found that vital factors in the economy have a relationship with the housing prices in Nairobi County more so the study established a positive correlation between price and population, money in supply in the economy inflation rate etc.

According to research done by Sila and Olweny (2014), they set out to "*find the financial determinants affecting the cost of housing in Kenya with a special focus on National Housing Corporation*." They found that land for construction especially in the major towns of this country is becoming scarce day by day probably due to the increasing demand of the resource. As the demand increases and supply decreases, then prices are likely to escalate and that for huge projects to be undertaken such as house construction, a loan facility is a prerequisite. The interest rate charged on the loan facility therefore is an integral component in determining whether or not the institutions will realize return on investment (ROI).

According to a study carried out by Loyford and Moronge (2014), they looked at "*the effects of economic factors on performance of real estate in Kenya*." They found out that interest rate, inflation, cost of transactions and the availability level highly influence the performance of real estate industry.

2.4 Determinants of Demand for Houses

There are many factors which are considered to determine the demand for houses. However, for purposes of this study the following factors will be the main area of concern:

As more people continue to find gainful employment, their desire to move from their parents' homes continue to grow, with the entry of many multinationals which are paying handsome salaries to its employees and with the continued economic growth, has resulted in many people especially the youth in demanding for houses thus pushing up the demand for houses. This according to Brueggeman and Fisher (2011) has a positive impact on the demand of houses while unemployment has a negative impact on the demand for housing.

The Kenyan economy, as per the report of World Bank (2015) is expected to grow at an average rate of 6 percent. This means as business especially SMEs continue to find business opportunities and grow, more and more people are finding their disposable incomes are increasing meaning more and more people are able to afford to either buy or rent their own place thus driving up the demand. A steady rise in the money in circulation in the economy is induced by a strong growing economy, this means that there is more disposable income for the people.

The interest rate regime in Kenya is relatively stable, according to research done by HassConsult (2014), meaning there is a bit of predictability in terms of the mortgage payments, also with pressure from the CBK more and more banks are starting to reduce their interest rates thus allowing many Kenyans have access to cheap financing, this is encouraging people to take up mortgages so as to buy houses and this is driving the demand for housing up. Thus it is evident that during periods of high interest rates, mortgages becomes expensive and demand for housing goes down and vice versa.

Investor confidence according to Brueggeman and Fisher (2011) is critical when it comes to determine whether the investors are going to take the plunge and risk to have part of their assets real estate and provide supply for housing needed to meet the demand. This is only possible if they deem that the rewards being generated from such investments outweigh the costs.

According to Brueggeman and Fisher (2011) a gradual increase in the population is a vital condition for housing demand. According to the census carried out by KNBS (2010), it is projected that the population will grow. A high population growth increases the demand for housing, this means it has a positive impact on the demand for housing.

2.5 Conceptual Framework

For the purposes of this research, the dependent variable will be the demand for high end houses measured by the units sold per month. The independent factors for this research will look at the prices at which the houses are being sold in the market, the economic growth and the interest rates. Economic growth is important for if the economy is growing, the disposable incomes will increase and thereby encouraging them to buy houses while the reverse is also true. Interest rates are important as they affect the availability of accessing funds by an individual and it also factors in construction of the houses thereby affecting the prices of the houses.

2.6 Summary of the Literature Review

Housing is considered to be very important to many people. It also includes a large portion of expenditure to many households. In the short run and to some extent the medium term, supply of houses is considered to be inelastic and thus the only factors to be considered are the pricing and the demand for the existing units.

There have been several studies carried out on the effect that pricing has on the demand for housing such as Conefrey and Whelan (2012) who looked at the effect of a 1 percent shock in demand and found that housing sales and its prices respond in a positive manner to demand shocks. Chen, Chang, Yang, and Hsieh (2012) found out that a rise in the economic situation of a nation results in a rise in real money and this is turn induces an increase in housing prices and Kuenzel and Bjornbak (2008) who in their study found that the main cause for increased house prices was the rise in demand which was driven by a general increase in the adult population and an overall easiness by which one could bring up a homestead. However, in Kenya specifically Nairobi County little research has been done to examine the effect of pricing on the demand for high end housing and the research that is being done tells us very little concerning the demand side, most only concerns itself with the house prices and the trend in the country. While prices being reported are good, investors on the other hand do not have information concerning whether there is a corresponding increase in the demand for these houses to allow them to make good investment decisions on a timely basis. This research aims to fill this gap in study and to also provide vital information to interested stakeholders and concerned investors on the key areas of opportunity and to know whether to seize the opportunity that is being presented by the high end housing market.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methods, tools and sources of research data, target groups and sample from which data was collected, data collection method, and data analysis techniques.

3.2 Research Design

A research design is "*the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. In fact it is the blue print for the collection, measurement and analysis of data.*" (Kothari, 2004).

This research adopted a descriptive study and followed a time series approach where quantitative design was used to investigate the effect of pricing on the demand for high end housing. A descriptive study according to Kothari (2004) "*includes surveys and fact finding enquiries of different kinds. The main purpose of such a study is the description of the state of affairs as it exists in the present*."

The reason for choosing this was due to the fact that "*it is a long term trend that shows the direction of the series in a long period of time. The effect of the trend is gradual, but extends more or less consistently throughout the entire period of time under consideration*" (Kothari 2004). This also allowed for the research to be done well within the research resources' constraints such as relative room for maneuver in term of time and money. It also allows for better analysis of the relationships between the variables using linear regression analysis.

Quantitative research is based on "*the measurement of quantity or amount. It is applicable phenomenon that can be expressed in terms of quantity*." The researcher used the information already available and collected some other information and based on these analyzed to reach a critical evaluation of the material.

3.3 Target Population

The target population is "*the complete set of individual cases or objects with some common characteristics to which the researcher wants to generalize the results of the study*" (Mugenda & Mugenda, 1999).

The target population was all the 78 real estate firms registered and based in Nairobi. This study, the researcher made use of the data from all the key players in the high end housing market, firms which cater to people with incomes comprising of average monthly salary of KShs. 160,000 and above. With that, secondary data for the past five years was gathered mainly from HassConsult limited, NHC, Kenya National Bureau of Statistics, Home Africa and any of the insurance companies with a presence in residential real estate.

3.4 Sample

A sample design is "*a definite plan for obtaining a sample from a given population. It refers to the technique or procedure the researcher would adopt in selecting items for the sample. (Kothari 2004). The sampling design helps the researcher to pay attention to the following the sampling unit, source list (sampling frame), size of sample for the study, the sampling frame contains the names of all the items of a universe*" (Kothari, 2004).

This study made use of a random sampling technique, this is because it allowed for the researcher to operate within the set constraints of the research. Therefore, the sample was randomly selected from 10 of the biggest players in the sector based on their market share. At least one from the public domain, 5 big players in the private domain and 2 medium sized businesses and 2 small sized also from the private sector of the industry.

3.5 Data Collection

The study employed the use of secondary data which is defined as those that have already been collected by someone else and which have already been passed through the statistical process. The secondary data was mainly on economic growth (this will look at the GDP growth), interest rates which will be obtained from the CBK.

The data on Economic/Income growth was measured from the figures obtained from the economic survey which was obtained from the KNBS. The data on house prices was obtained mainly from HassConsult and other key players in the high – end residential market. The period of study for which the data will be obtained for focused on a 5 year period from January 2009 and December 2014.

3.6 Data Analysis

Data analysis is "*the process which start immediately after data collection and ends at the point of interpretation and processing*" (Mugenda & Mugenda 2013). Data was analyzed using the Statistical Package for Social Sciences (SPSS). Analyzed data included the sample mean, standard deviation, regression and correlation analysis.

3.6.1 Analytical Model

A multiple regression analysis model was used to come up with the model showing the relationship between the dependent variable (demand which measured by looking at the sales figure rep. by Y) and the independent variable (price rep. by X).

The multiple linear regression model was be given by:

$$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

$\hat{Y}$ = Demand for high end houses as measured by the percentage growth in the number of units sold from $T_0 – T_1$

α = Represents the demand of Y when price is Zero

X_1 = Pricing as measured by the percentage growth in average prices charged in the market

X_2 = Economic Growth (GDP growth) measured by the growth in GDP

X_3 = Interest rate measured by the average interest rates

ε = Error Term

3.6.2 Test of Significance

Pearson's Coefficient of correlation is "*the statistical tool used for measuring the degree of relationship between two variables.*" This tool was used to determine whether there is a positive or a negative correlation between pricing and demand for the high end housing market. The study also determined the coefficient of determination and the Analysis of Variance.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, interpretation and discussion of the research findings. The study used correlation analysis, data regression analysis, simple mean, standard deviation and the analysis of variance.

4.2 Descriptive Statistics

This section presents the state of affairs the research found in the field. The measures of central tendency analysis is presented.

4.2.1 Measures of Central Tendency

Table 4.1: Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
No. of Units Sold	72	-83.33	275.00	11.2628	6.04546	51.29743
Price of Houses	72	-.96	3.72	.6412	.10875	.92274
Economic Growth	72	-3.20	4.10	1.3042	.21333	1.81018
Monthly Interest Rates	72	1.15	1.70	1.3567	.02016	.17104
Valid N (listwise)	72					

Source: Research Findings

Results in table 4.1 indicate that the minimum percentage increase in economic growth for the period was -3.4 percent while the maximum percentage growth of the economy was 4.10 percent. The average economic growth (GDP) was 1.30 percent. The analysis also shows that the lowest interest rate charged was 1.15 percent while the highest interest rate charged was 1.70 percentage points. On average the interest rates charged stood at around 1.3567 percent.

The analysis also indicates that the minimum increase in percentage points of house prices was --.96 percent while the maximum that houses increased by was 3.72 percent during the period. The average increase in the price of houses was .64 percent. Results also indicate that the minimum number of units sold increased by -83.33 percent while the maximum number of units sold increased by 275 percent. The average increase in number of units sold was 11.26 percent.

4.3 Inferential Statistics

The researcher used inferential statistics to infer from the sampled data what it represents. Researcher used this statistic to make some judgments of the probability that the observed difference is a dependable one and not one that happens to show up by chance.

4.3.1 Regression Analysis

This is "*a statistical tool that is used for the investigation of relationships between variables. It seeks to ascertain the casual effects of one variable upon another and to further explore such issues and estimate the quantitative effect*" (AO Sykes, 2013).

It include a majority of the techniques for modelling and analyzing several variables when the focus is on the relationship between a dependent variable and one or more independent variables, in this study regression model was applied to determine the effect of pricing on the demand of high – end housing in Nairobi County.

4.3.2 Correlation Analysis

The correlation coefficient is "*a measure of linear association between two variables. Values of the correlation coefficient are always between –1 and + 1*" (Stanton, 2001).

A correlation coefficient of +1 thus indicates that two variables are perfectly related in a linear meaning. A correlation coefficient of -1 indicates that two variables are negatively related in a linear sense such that an rise in one of the variable leads to a decrease in the other variable and a correlation coefficient of 0 means there is no relationship between the two variables.

4.3.3 Analysis of Variance

This is a "statistical method used to test differences between two or more means. It is used to test general rather than specific differences among means. ANOVA assess the importance of one or more factors by comparing the response variable means at the different factor levels. The statistic assess the importance of one or more factors." (Wright, 2006).

The procedure works by "comparing the variance between group means versus the variance within groups as a way of determining whether the groups are all part of one larger population or separate populations with different characteristics." (Wilcox, 2005).

4.3.4 Model Results

A multiple linear regression model was applied to determine the effect of pricing on the demand of high – end houses in Nairobi County. The regression model was:

$$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

$\hat{Y}$ = Demand for high end houses as measured by the percentage growth in the number of units sold from $T_0 – T_1$

α = Represents the demand of Y when price is Zero

X_1 = Pricing as measured by the percentage growth in average prices charged in the market

X_2 = Economic Growth (GDP growth) measured by the growth in GDP

X_3 = Interest rate measured by the average interest rates

ε = Error Term

Table 4.2: Model Fitness

Indicator	**Coefficient**
R	0.254
R Square	0.064
Adjusted R Square	0.023
Standard Error of the Estimate	50.7

Source: Research Findings

This section presented the model results. Results in table 4.2 indicates that the goodness of fit of the model was appropriate. This was reported by an r squared of 0.064 which means that 6.4% of the variation in the incremental number of units sold was explained by house prices, economic growth and interest rates. This implies that 94% of the variations in demand for housing is explained by other factors not captured in the model.

The analysis of variance (ANOVA) results in table 4.3 indicate that the overall model was significant. This was supported by a p value of 0.207. The ANOVA results demonstrated that the factors affecting the demand for housing that is house prices, economic growth and interest rates are fair predictors.

Table 4.3: Analysis of Variance (ANOVA)

Indicator	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Regression	12032.41	3	4010.81	1.56	0.207
Residual	174798.84	68	2570.57		
Total	186831.26	71			

Source: Research Findings

Table 4.4: Correlation

Correlations

		No. of Units Sold	Price of Houses	Economic Growth	Monthly Interest Rates
No. of Units Sold	Pearson Correlation	1	-.175	.192	.014
	Sig. (2-tailed)		.142	.106	.904
	N	72	72	72	72
Price of Houses	Pearson Correlation	-.175	1	-.047	-.130
	Sig. (2-tailed)	.142		.697	.276
	N	72	72	72	72
Economic Growth	Pearson Correlation	.192	-.047	1	-.018
	Sig. (2-tailed)	.106	.697		.883
	N	72	72	72	72
Monthly Interest Rates	Pearson Correlation	.014	-.130	-.018	1
	Sig. (2-tailed)	.904	.276	.883	
	N	72	72	72	72

Source: Research Findings

The researcher did some correlation analysis to establish the relationship between the components and the demand of housing as measured by the incremental units sold. The study was done at a 95% level of confidence. The results are shown on table 4.4. The results show that for high end housing market the house prices are negatively correlated to the demand for housing. This implies that an increase in prices leads to a fall in demand and an increase in percentage of house sold leads to a fall in prices. Economic growth and monthly interest rate reveal that there is a positive correlation between them and the incremental units of high end housing sold.

Table 4.5: Regression Analysis

Variable	Beta	Std. Error	T	Sig.
Constant	12.004	49.56	0.242	0.809
Price of Houses	-9.262	6.59	-1.407	0.164
Economic growth	5.218	3.33	1.568	0.122
Monthly Interest Rates	-1.185	35.49	-0.033	0.973

Source: Research Findings

The regression coefficient results indicate that there is a negative relationship between the number of units sold and the prices of houses. Therefore the equation becomes:

$Y = 12.004 – 9.262X_1 + 5.218X_2 – 1.185X_3 + \varepsilon$

4.4 Interpretation of the Findings

The minimum incremental number of units sold were -83.33 percentage points while the maximum incremental number of units sold was 275%. The overall incremental number of units sold was 11.3 percent.

The results obtained also indicate that the incremental number of units sold had an effect of a minimum incremental effect of -0.96 percent and a maximum of 3.72 percent on the prices of houses. On average the mean incremental price of houses was around 0.64 percent. As house prices go up, fewer and fewer people find themselves able to afford a house thereby the demand for high – end housing goes down. Conversely, as the prices of housing goes down the more the number of people who can afford the and thus the higher the demand for the high – end houses.

The negative correlation between the units sold and price of houses indicates that the houses even for the high – end residential houses is still a normal good, this means when price increases the units sold decreases and when the price decreases the units sold increase.

The interest rate factor had a minimum of 1.15 percent and a maximum percentage of 1.70. The mean of the interest rate was around 1.3567 percent on monthly basis. Interest rates have a major impact on the number of units to be sold. Changes in interest rate may have a major impact on an individual's capacity to buy a high – end residential property. That is because as the rates charged for mortgages go up, the cost to obtain funds to buy a house go up, this in turn has the effect of pushing the cost of housing up thereby reducing the demand for housing. Alternatively, as the interest rates fall, the cost to obtain funds falls and eventually the cost to obtain a house goes down.

The results further show that the incremental economic growth had a minimum of -3.20 percent while the maximum was 4.10 percent. The mean for the incremental economic growth was 1.30 percent. The GDP growth is an indicator of how well the economy is doing, thus if the economy is improving as revealed by the GDP, it implies that the personal wealth of the people of the nation is growing which leads to an increase in the demand for high – end housing. On the other hand if the GDP is deteriorating then people's incomes in essence are shrinking and thus the demand for housing is not that high thus fewer number of houses are sold.

From the model fitness, the coefficient of determination (R^2) indicates that 6.4% of change in the units sold was accounted for by the explanatory variables. This further means other factors like speculation of property may be having an effect on units sold over the years studied.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the final chapter of the entire project. The chapter has sections on the summary of the findings of the study, conclusions, recommendation of the study and the suggestions for further studies.

5.2 Summary

This study aimed to determine the effect of pricing on the demand of the high end houses in Nairobi County. The researcher reviewed previous literature with the aim of establishing academic gaps which this study aimed to bridge. This was through extensive research in the library, the internet etc. The process included reading, evaluating the methodology employed by other studies in terms of the target population, data collection instruments that is, their reliability, data analysis, findings and the recommendations put forward. The benefit of this literature to the researcher cannot be overlooked as it guided the researcher to the present study by revealing areas that needed to be investigated further.

This study made use of quantitative research as the main approach to guide the study. The study population consisted of the key players in the high – end residential market in Nairobi County. The study made use of secondary data which was collected from past data that had been previously been collected and tabulated through reports by the Kenya National Bureau of Statistics (KNBS). Data on the interest rates was obtained from the publications of CBK. This data included information for every month for the period between January 2009 to December 2014.

The data was checked for completeness and analyzed using the Statistical Package for Social Sciences (SPSS Version 20) package and Microsoft Office Excel computer packages to generate quantitative reports, which were presented in the form of tabulations, mean and standard deviation.

Regression analysis was carried out to determine the relationship between the different determinants of demand for high – end real estate houses. Results concluded that there is a negative relationship between high end house prices and demand for high end houses. This is at par with the notion that houses are normal goods and not goods of ostentation. The higher the price the lower the demand and vice-versa.

The analysis also revealed that there is a positive relationship between economic growth and demand for houses. There is also a negative relationship between interest rates and house demand.

5.3 Conclusion

Based on the findings of this research, the following can be reached at regarding the effect of pricing on the demand of high – end houses in Nairobi County. This study concluded that there is an inverse relationship between demand for high – end houses in Nairobi County. Meaning an increase in house prices leads to a decrease in the demand and a decrease in house prices leads to an increase in demand.

The study also concludes that a strong economy as measured by GDP has a positive impact on the demand for houses in Nairobi County. Wheaton’s model (1992) argues “that productive economy positively affects demand for real estate." Chin et. al. (2006) from their research concluded that the robustness of a nation's economy is key factor in attracting foreign investments especially to the real estate sector.

It is also possible to conclude that house demand in Nairobi County is affected by interest rates. Such that high interest rates discourage potential buyers from borrowing to buy a house and also raises cost of housing thereby decreasing the demand for houses. Chacha (2013) study found that lending rates have a negative impact on growth of an economy and demand for houses. A rise in lending rates decreases the rate at which the economy grows and housing demand.

5.4 Recommendations for Policy and Practice

The study found that demand for houses are negatively affected by prices, such that an increase in house prices tends to lock out buyers from affording a house. It is recommended that policy makers should come up with guidelines to prevent house prices from sky rocketing within a short period of time so as to protect the industry and consumers from rogue agents and contractors who are just out to make profits.

The study also found that demand for houses is impacted positively by the economic situation of a country. It is recommended that government and policy makers should pursue policies that not only enhance the economy but also those policies that facilitate the expansion.

The study further recommends for policy makers and the CBK to look for means for bringing interest rates down to an acceptable level from the stand point of consumers. Interest rates have a negative impact on demand for houses and therefore proper mechanisms should be put in place, since interest rates also affect the economy, to ensure the country is not held hostage by the banks through their interest rate charges.

5.5 Limitations of the Study

The researcher encountered various limitations that they may have affected the findings of this study. For instance the reliance on secondary data sources, this type of data can in some cases be unreliable and even though the researcher tried everything in his scope to ensure its reliability there can never be a 100 percent assurance of a secondary source reliability. To protect the research from this, the study sought information that was ratified by the various sources only and nothing from outside them.

The researcher was also faced with the problem of scarce information which means the research took quite a substantial amount of time to put the data together. Taking in consideration that some of the information had to come from government sources and their reliability verified, the time and resources spent were quite a limitation on the researcher. The fact that also the lack of free sharing of information by some firms was a limitation to this study.

5.6 Suggestions for Further Research

This research study aimed at establishing the effect of pricing on the demand of high – end houses in Nairobi County attempting to bridge the gap in knowledge that existed. Even though these aims were achieved, it mainly focused on a few indicators that affect the demand for houses. There is need to conduct further studies on other indicators that come in when purchasing a house. Those further studies should also make an attempt to differentiate the effects those factors have on different types of houses.

This study applied for the period between 2009 to 2014 because it was within the data available at the time. Since then some changes have happen to the economic situation in the country and therefore it would be of interest to do another research to find out if the events will have an impact of the factors and the findings or whether the findings of this research will still remain.

REFERENCES

Anyangu-Amu S. (2009). Kenya: *Anti-Money laundering Bill passes bu does government mean business?* Retrieved September 13, 2012 from http: www.ipsnew.net/2009/12/Kenya-anti-money-laundering-bill-passes-but-does-govt-mean-business/

Ballesteros, M., M. (2002). The Dynamics of Housing Demand in the Philippines: Income and lifestyle effects. *Philippine Institute for Development Studies.* 2002 – 01, 45 – 46.

Basten, C., & Koch, C. (2014). The Casual Effect of House Prices and Mortgage Demand and Mortgage Supply. *Journal of Economic Literature.* 140, 33 – 36.

Baumol, W., J., & Blinder, A., S. (2011). *Economics: Principles and Policies,* New York: Cengage learning

Benito, A., Thompson, J., Waldron, M., Wood, R. (2006). House Prices and Consumer Spending. *Bank of England Quarterly Review.*

Brueggeman, W., B. & Fisher, J., D. (2011). *Real Estate Finance and Investments* (14th Edition). New York, NY. McGraw-Hill

Case, K., E., & Shiller, R., J. (2004). Is There a Housing Bubble in the Market? *Cowles Foundation for research in Economics.* 1089, 1-65

Cheng, M., Chang, C., Yang, C., & Hsieh, B. (2012). Investment Demand and Housing Prices Emerging Economy. *Journal of Real Estate Research*, 3, 24 – 26.

Conefrey, T., & Whelan, K. (2012). Supply, Demand and Prices in the US Housing Market. *Journal of Economic Literature.* R21, R31, 38 – 44.

Davenport, J., L. (2003). The Effect of Supply and Demand Factors on the Affordability of Rental Housing. Retrieved from http://digitalcommons.iwu.edu/econ_honproj/10

Han, L. (2011). The Effects of Price Risk on Housing Demand: Empirical Evidence from US Markets. Unpublished.

HassConsult, (2014). Hot Spots Across Suburbs see Rises of Over 20%, Annual Report, (2014). *HassConsult Property Index.* Retrieved from http://www.hassconsult.co.ke/index.php/quarterly-report

Kariuki, C. (2012). *The Factors Affecting Residential Property Values In Nairobi, Kenya.* 8_{th} Fig Regional Conference 2012. Unpublished.

Kenya Property Developers Association, (2013). Property Construction at Only 7.5% of Government Targets Quarter 3, 2013. *HassConsult Property Index.* Retrieved from http://www.hassconsult.co.ke/index.php/quarterly-report

Knight, F. (2015). Africa the Growth Continent. Africa Report 2015.

Kothari, C., R. (2004). *Research Methodology: Methods and Techniques.* Daryaganj, New Delhi. New Age International (P) Ltd Publishers.

Kuenzel, R., & Bjornbak, B. (2008). The UK Housing Market: Anatomy of a House Price Boom. *Directorate – General for Economic and Financial Affairs.* 5(11), 1 – 8.

Kenya National Bureau of Statistics. (2010). *Population and Household Distribution by Socio – Economic Characteristics.* 2.

Loyford, M., M., & Moronge, M. (2014). Effects of Economic Factors on Performance of Real Estate in Kenya. *European Journal of Business Management*, 1(11), 181 – 200.

Lumsden, K., G. (2003). *Economics*. Essex, United Kingdom. Pearson Education.

Manson, K., (2014, November 21). Nairobi's Booming Real Estate. *Financial Times.* Retrieved from: http://www.ft.com/cms/s/0/aeadd9aa-6a88-11e4-a038-00144feabdc0.html

Mugenda, M. & Mugenda, G. (2013). *Research Methods, Quantitative and Qualitative Approaches.* Kenya.

Ochuodho, P., O. (2011). *Real Estate Prices and Economic Fundamentals: An Empirical Investigation of the Residential Housing Market in Nairobi City*. Retrieved From https://surplus.strathmore.edu/bistream/handle/123456789/1569/Ochuodho%20Peter%20Thesis%20-%202011.pdf?sequence=1

Omboi, B., M., (2011). Factors Influencing Real Estate Property Prices: A Survey of Real Estate in Meru Municipality, Kenya. *Journal of Economics and Sustainable Development*, 2 (4), 1 – 21.

Otieno, J. (2014, July 26). Demand for High – End Houses on Decline as Target Market Opts Out. *The East African.* Retrieved from http://www.theeastafrican.co.ke/business/Demand-for-high-end-houses-on-decline-as-target-market-opts-out/-/2560/2398572/-/6pa59r/-/index.html

Peterson, B., & Zheng, Y. (2011). Medium – Term Fluctuations in Canadian House Prices. *Bank of Canada Review*. *30.*

Sila, T.M., & Olweny T. (2014). Financial Determinants Affecting the Cost of Housing in Kenya: A Case study of National Housing Corporation. *International Journal of Business and Law Research*, 2, 1 – 16.

Stephan, V., Poghosyan, T., Bibolov, A. (2010). *House Price Determinants in Selected Countries of the Former Soviet Union.* International Monetary Fund.

Varian, H., R. (1992). *Microeconomic Analysis.* New York, NY. W. W. Norton & Company

Weber, T., A. (2010). Price Theory in Economics. In Ozer, O., Phillips, R. (Eds.). *The Oxford Handbook of Pricing Management.* Oxford University Press.

Walras, L. (1877). *Elements of Pure Economics,* London, UK: Allen and Unwin.

Simonsohn, U., & Lowenstein, G. (2006). The Effect of Previously Encountered Prices on Current Housing Demand. *The Economic Journal*. 116, 181 – 196.

Yuanbin, H. (2006). A Game Theory Analysis on Developer, Local Government and Consumer in Real Estate Market. *Journal of Beijing Technology and Business University*: Social Science vol. 5

Zhenguo, H., & Li, W. (2006). Prevention Mechanism of the Real Estate Bubble: An Analysis Based on Game Theory and Dynamic Inconsistency. *Research on Economics and Management*, Vol. 4.

APPENDICES

APPENDIX I: List of Real Estate Developers and Agents in Nairobi County

1. Active Homes
2. Afriland Agencies
3. Ark Consultants Ltd
4. Barloworld Logistics (Kenya) Ltd
5. Betterdayz Estates
6. British American Asset Managers
7. Canaan Properties
8. Capital City Limited
9. CB Richard Ellis
10. Colburns Holdings Ltd
11. Coral Property Consultants Ltd
12. Country Homes and Properties
13. Crown Homes Management
14. Crystal Valuers Limited
15. Daykio Plantations Limited
16. Double K Information Agents
17. Dream Properties
18. Dunhlill Consulting Ltd
19. East Gate Apartments Limited
20. East Gate Apartments Limited
21. East Gate apartments limited
22. Eastwood Consulting Limited
23. Ebony Estates Limited
24. Economic Housing Group
25. Elgeyo Gardens Limited
26. Fairway Realtors And Precision Valuers
27. FriYads Real Estate
28. Gimco Limited
29. Greenspan Housing
30. Hajar Services Limited
31. Halifax Estate Agency Ltd.
32. HassConsult
33. Hewton Limited
34. Homes and lifestyles
35. Housing Finance
36. Jacent Properties Limited
37. Jimly Properties Ltd
38. Jogoo Road Properties
39. Josekinyaga Enterprises Ltd
40. Josmarg Agencies
41. Kali Security Co Ltd

42. Karengata Property Managers
43. Kenya Prime Properties Ltd
44. Kenya Property Point
45. Kilifi Konnection
46. Kiragu & Mwangi Limited
47. Kitengela Properties Limited
48. Knight Frank Limited
49. Kusyombunguo Lukenya
50. Land & Homes
51. Land & Homes
52. Langata Link Estate Agents
53. Langata Link Ltd
54. Lantana Homes
55. Legend Management Ltd
56. Lloyd Masika Limited
57. Mamuka Valuers (M) Ltd
58. Mark Properties Ltd.
59. Market Power Limited
60. Mentor Group Ltd
61. Merlik Agencies
62. Metrocosmo Ltd
63. Mombasa Beach Apartments
64. Monako Investment Ltd
65. Muigai Commercial Agencies Ltd.
66. Myspace Properties (K) Ltd.
67. N W Realite Ltd
68. Nairobi Real Estates
69. Neptune Shelters Ltd
70. Oldman Properties Ltd
71. Oloip Properties
72. Ounga Commercial Agencies
73. Palace Projects Limited
74. Property Investment Network
75. property zote.com
76. Raju Estate Agency Limited (REAL)
77. Tysons Limited
78. Urban Properties Consultants & Developers Ltd

Source: Property and Real Estate Agents Kenya Fiscal Report as at 2015

APPENDIX II: Actual Prices of Real Estate Units Sold

Period	Ksh.s Asking Price	INDEX 2000 Dec = 100	Monthly % Change	Quarterly % Change	Annual % Change
2009 Jan	16,854,075	235.1	1.69%	3.03%	26.16%
2009 Feb	17,060,390	238.0	1.22%	3.36%	26.97%
2009 Mar	17,366,144	242.3	1.79%	4.78%	27.06%
2009 Apr	17,417,993	243.0	0.30%	3.35%	24.15%
2009 May	17,574,759	245.2	0.90%	3.01%	23.30%
2009 Jun	17,680,903	246.7	0.60%	1.81%	22.30%
2009 Jul	18,126,291	252.9	2.52%	4.07%	21.21%
2009 Aug	18,158,688	253.3	0.18%	3.32%	18.22%
2009 Sep	18,322,167	255.6	0.90%	3.63%	16.34%
2009 Oct	18,757,806	261.7	2.38%	3.48%	14.67%
2009 Nov	19,281,254	269.0	2.79%	6.18%	16.82%
2009 Dec	19,444,050	271.3	0.84%	6.12%	17.31%
2010 Jan	19,309,345	269.4	-0.69%	2.94%	14.57%
2010 Feb	19,241,624	268.4	-0.35%	-0.21%	12.79%
2010 Mar	19,072,785	266.1	-0.88%	-1.91%	9.83%
2010 Apr	19,126,527	266.8	0.28%	-0.95%	9.81%
2010 May	19,272,121	268.9	0.76%	0.16%	9.66%
2010 Jun	19,312,505	269.4	0.21%	1.26%	9.23%
2010 Jul	19,427,529	271.0	0.60%	1.57%	7.18%
2010 Aug	19,488,244	271.9	0.31%	1.12%	7.32%

2010 Sep	19,957,278	278.4	2.41%	3.34%	8.92%
2010 Oct	20,361,761	284.1	2.03%	4.81%	8.55%
2010 Nov	20,487,131	285.8	0.62%	5.13%	6.25%
2010 Dec	21,014,423	293.2	2.57%	5.30%	8.08%
2011 Jan	21,360,219	298.0	1.65%	4.90%	10.62%
2011 Feb	21,611,235	301.5	1.18%	5.49%	12.32%
2011 Mar	21,940,602	306.1	1.52%	4.41%	15.04%
2011 Apr	22,144,213	308.9	0.93%	3.67%	15.78%
2011 May	22,160,707	309.2	0.07%	2.54%	14.99%
2011 Jun	22,347,330	311.8	0.84%	1.85%	15.71%
2011 Jul	22,270,188	310.7	-0.35%	0.57%	14.63%
2011 Aug	22,346,066	311.7	0.34%	0.84%	14.66%
2011 Sep	22,132,400	308.8	-0.96%	-0.96%	10.90%
2011 Oct	21,925,523	305.9	-0.93%	-1.55%	7.68%
2011 Nov	21,966,525	306.5	0.19%	-1.70%	7.22%
2011 Dec	21,970,397	306.5	0.02%	-0.73%	4.55%
2012 Jan	21,776,217	303.8	-0.88%	-0.68%	1.95%
2012 Feb	22,048,508	307.6	1.25%	0.37%	2.02%
2012 Mar	22,251,914	310.4	0.92%	1.28%	1.42%
2012 Apr	22,441,485	313.1	0.85%	3.06%	1.34%
2012 May	22,463,961	313.4	0.10%	1.88%	1.37%
2012 Jun	22,544,512	314.5	0.36%	1.31%	0.88%
2012 Jul	23,383,430	326.2	3.72%	4.20%	5.00%
2012 Aug	23,575,833	328.9	0.82%	4.95%	5.50%
2012 Sep	23,703,131	330.7	0.54%	5.14%	7.10%
2012 Oct	23,906,551	333.5	0.86%	2.24%	9.04%
2012 Nov		335.8	0.68%	2.09%	9.57%

	24,069,551				
2012 Dec	24,102,406	336.2	0.14%	1.68%	9.70%
2013 Jan	24,169,884	337.2	0.28%	1.10%	10.99%
2013 Feb	24,249,323	338.3	0.33%	0.75%	9.98%
2013 Mar	24,229,542	338.0	-0.08%	0.53%	8.89%
2013 Apr	24,416,868	340.6	0.77%	1.02%	8.80%
2013 May	24,634,872	343.7	0.89%	1.59%	9.66%
2013 Jun	24,786,713	345.8	0.62%	2.30%	9.95%
2013 Jul	24,660,208	344.0	-0.51%	1.00%	5.46%
2013 Aug	24,578,197	342.9	-0.33%	-0.23%	4.25%
2013 Sep	24,416,509	340.6	-0.66%	-1.49%	3.01%
2013 Oct	24,333,475	339.5	-0.34%	-1.32%	1.79%
2013 Nov	24,156,108	337.0	-0.73%	-1.72%	0.36%
2013 Dec	24,184,047	337.4	0.12%	-0.95%	0.34%
2014 Jan	24,404,180	340.5	0.91%	0.29%	0.97%
2014 Feb	24,490,327	341.7	0.35%	1.38%	0.99%
2014 Mar	24,638,995	343.7	0.61%	1.88%	1.69%
2014 Apr	24,735,113	345.1	0.39%	1.36%	1.30%
2014 May	24,787,150	345.8	0.21%	1.21%	0.62%
2014 Jun	24,797,980	346.0	0.04%	0.65%	0.05%
2014 Jul	25,021,212	349.1	0.90%	1.16%	1.46%
2014 Aug	25,220,575	351.8	0.80%	1.75%	2.61%
2014 Sep	25,560,769	356.6	1.35%	3.08%	4.69%
2014 Oct	25,754,968	359.3	0.76%	2.93%	5.84%
2014 Nov	26,040,061	363.3	1.11%	3.25%	7.80%
2014 Dec	26,180,861	365.2	0.54%	2.43%	8.26%

Source: HassConsult as at 2015