

**FACTORS INFLUENCING DEMAND AND SUPPLY OF REAL  
ESTATE PROPERTY IN NAIROBI COUNTY, KENYA: A CASE  
OF ERDEMANN PROPERTY LIMITED**

**BY  
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**A Research Project Submitted in Partial Fulfillment of the Requirements for the  
Award of the Degree of Master of Arts in Project Planning and Management of  
the University Of Nairobi**

**2016**

**DECLARATION**

This research project report is my original work and has not been presented for any award in any other university.

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## **DEDICATION**

This research project report is dedicated to Erdemann Property Limited, a Kenyan company with a Mission of providing decent and affordable housing to middle and low income earners and a Vision of seeing a Kenya where every family is in a position to own or rent a decent house.

## **ACKNOWLEDGEMENT**

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>CBK</b>	-	Central Bank of Kenya
<b>EPL</b>	-	Erdemann Property Limited
<b>GDP</b>	-	Gross Domestic Product
<b>KENSUP</b>	-	Kenya Slum Upgrading Program
<b>KNBS</b>	-	Kenya National Bureau of Statistics
<b>KNHS</b>	-	Kenya National Housing Survey
<b>KPDA</b>	-	Kenya Property Developers Association
<b>MDG</b>	-	Millennium Development Goals
<b>MLHUD</b>	-	Ministry of Land, Housing and Urban Development
<b>MOH</b>	-	Ministry of Housing
<b>NCA</b>	-	National Construction Authority
<b>NHC</b>	-	National Housing Corporation
<b>RoK</b>	-	Republic of Kenya
<b>SPSS</b>	-	Statistical Program for Social Sciences
<b>UN</b>	-	United Nations
<b>USA</b>	-	United States of America

## ABSTRACT

Nowadays, rapid increase in population, immense migration of people to urban centers and industrialization has forced the government and realtors to rethink on ways to fulfill the increased demand for real estate properties especially in urban areas. However, most governments have participated minimally in this sector leaving the private sector to dominate the industry despite demand being high while supply is low. In Kenya, investment in real estate has been a major sector that is attracting many potential investors contributing to 12% of GDP. Real estate property market has been booming in Kenya in the past decade and it continues to boom. However, demand and supply for real properties continues to pose a great challenge in the country particularly in urban towns due to urbanization. The high demand for housing against a background of limited supply has resulted into deplorable shelter conditions. The purpose of this study is to establish the influence of demand and supply of real estate property in Nairobi County, Kenya, with focus to Erdemann Property Limited. The study was guided by the following specific objectives, that is, to establish how price, economic situation, land availability and demographic profile influences demand and supply of real estate property in Nairobi County. This study employed descriptive research design. The target population of this study was managers working at Erdemann Property Limited in Nairobi County. Simple random sampling technique was used to select 8 respondents. The study relied mostly on primary data sources where self-administered questionnaire was utilized as source of data. Data collected for this study was purely quantitative. Quantitative data was coded and entered into Statistical Packages for Social Scientists (SPSS Version 17.0) and MS. Excel and analyzed using descriptive statistics. The finding was presented in form of frequency tables and explanation is presented in prose. The knowledge established from this study is useful in helping the regulatory authorities and real estate developers to formulate future policies aiming at meeting demand of the real estate property. The study concluded that competition for limited key resources and sharp increases in the price of some building materials has led to high costs of housing. High cost of land in areas profiled as prime areas hinders real estate developers to meet the demand of affordable housing in such areas. Property taxes, property insurance, mortgage fee and insurance, regular maintenance and sporadic upgrades, higher utilities limit the demand and supply of real estate property. Finally, the study concludes that increased demand for real estate property in most urban areas leads to building more housing developments and accelerated growth in supply of property in that area. The study recommends that the government should regulate the real estate market and since demand is expected to keep on increasing; persistent regulatory restrictions on land supply or how intensively land can be used should be put in place. The government should put in place measures to check house price inflation and rental inflation which can deviate when supply of new housing is slow to respond to changes in market conditions. The National and County governments should have master plans and zone the city bearing in mind the needs for housing for its occupants. The county government should amend the available planning laws in order to allow construction of more buildings in the study area.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

This study seeks to establish factors influencing demand and supply of real estate property in Nairobi County, Kenya. Housing plays a very big role in revitalizing the growth of the economy in any country, with housing provision being among key indicators of development (Ileri, 2010). In Kenya, and especially in the urban areas, demand for housing exceeds its supply as a result of among other factors poor planning hence an increase in informal settlements without proper housing and very little infrastructure services (UN-HABITAT, 2008). The current annual demand for Housing in Nairobi County is over 250,000 units and the houses brought into the market annually by both government and private developers is about a paltry 30,000 units only (Ministry of Land, Housing and Urban Development, 2013). However, it is the private sector that has dominated the industry with their contribution to providing real estate properties in the market outnumbering what the government has done in the last decade (Hassanali, 2012).

The continued rise in demand for housing in Nairobi County has not gone unnoticed (Otieno, 2012). Increasing numbers of young households, rapid urbanization, growing middle class and rapid increase in population, migration of people from the rural areas and industrialization has forced the government and realtors to rethink on ways to fulfill the demand for real estate properties (Kenya National Housing Survey, 2011). The report continues to say that investors, both foreign and local as well as buyers are eager to tap into this robust growth. To unlock this sector's potential, realtors and government planners are positioning themselves strategically too.

According to Kenya's Ministry of Land, Housing and Urban Development, the Government is keen on working with NHC and private developers to bring more affordable units into the market (Ministry of Land, Housing and Urban Development, 2013). In her speech while groundbreaking a project for Erdemann Property Limited called Great Wall Apartments Phase II, The Cabinet Secretary, Hon. Charity Kaluki Ngilu said the government of Kenya wished that labourers who work to build houses should also live in houses and not shackles. This was further echoed by her successor, Dr. Fred Matiang'i, PhD who said that the Ministry of land, Housing and Urban Development has a Second Medium Term Plan (2013-2017) of facilitating sector players to increase annual delivery of housing units to at least 200,000units per year.

The property industry in Kenya and in the region has for a long time lacked sufficient actionable data leading to a lot of speculation on virtually all transactions regarding property. The MLHUD has set up a group, Affordable Housing Contact Group with a specific focus of realizing the goal of enabling the provision of affordable housing in Kenya. The thematic areas that led to the creation of this group include Mobilization Of Funds for Housing Development, Incentives for Low Cost Housing, Regulatory And Industrial Framework and Land and finally Project Profiling.

The case of Erdemann Property Limited, which has developed over 2000 housing units in the past decade and commercial property in Nairobi is a classic example of Nairobi real estate developers contributing towards bringing housing units into the Nairobi market. Erdemann's developments include the Great Wall Apartments Phases I, II, and III all in Mlolongo, Seefar Apartments off Mbagathi Road in Langata South District, Metro Fair

View Towers in Pangani, Windsor View Apartments in Thindigwa, Kiambu just to mention but a few (www.erdemann.co.ke, 2013). Being one of the fast growing realtors, the organization enjoys unique advantage due to immense growing interest in ownership of houses by the residents of Nairobi and general interest in the real estate market (Okumu, 2011).

## **1.2 Statement of the Problem**

Available information in the websites of property developers or information with individuals lack details on all the factors influencing demand and supply of real estate property (Omengo, 2013). They only give the impact of real estate to the economic growth and the price. But for some reason, the real estate market prices in different locations in Nairobi seem to be dictated by what comes across as quite a different set of forces. Real estate property negotiations and prices are widely determined by realtors and brokers in Kenya as people strive to cope with rapid growing demand for housing which has outstripped supply (Mwithiga, 2010).

Real estate prices in Kenya have more than doubled in the past few years (Majtenyi, 2010) and the supply continues to be outweighed by the demand (Masika, 2012). In Kenya, the real estate property market has been booming due to among other factors increased availability of financing through mortgages (Masika, 2012). For example, sixty per cent of the pension fund goes to the real estate sector through purchases or investment and pensions also act as security for the mortgages (Okumu, 2010).



### **1.3 Purpose of the study**

The purpose of this study was to establish the factors influencing demand and supply of real estate property in Nairobi County, Kenya: A case of Erdemann Property Limited.

### **1.4 Objectives of the Study**

The study was guided by the following objectives:

- i. To establish how price of real estate influences demand and supply of real estate property in Nairobi County.
- ii. To determine how land availability influence demand and supply of real estate property in Nairobi County.
- iii. To assess how economic situation influence demand and supply of real estate property in Nairobi County?
- iv. To assess how demographic profile influence demand and supply of real estate property in Nairobi County.

### **1.5 Research Questions**

This study sought to answer the following questions

- i. How does price influence demand and supply of real estate property in Nairobi County?
- ii. How does land availability influence demand and supply of real estate property in Nairobi County?
- iii. How do economic situation influence demand and supply of real estate property in Nairobi County?

- iv. How does demographic profile influence demand and supply of real estate property in Nairobi County?

### **1.6 Significance of the Study**

This research study may be of great benefit to Erdemann Property Limited and other realtors since it may provide information on factors influencing demand and supply of real estate property in Nairobi County. The findings of this study may provide information on the influences of demand and supply of real estate property and provide information of how those factors can enhance real estate market. The findings of this study may also be used by the realtors and agents to ensure that it analyses factors influencing demand and supply of real estate property.

To the national government and Nairobi County, the study may provide information that can be used in the formulation of policies related to demand and supply of real estate property.

The finding may be also of important to researchers and academicians to form a basis for further researches. Research organizations and scholars may be provided with background information if they will want to carry out further research in this area and related areas. The study may also facilitate individual researchers to identify gaps in the current research and carry out research in those areas.

### **1.7 Limitations of the Study**

This study's main limitation is the inability to include more organizations in the research. It is a case of Erdemann Property Limited which the researcher selected. To have a wider

analysis, the study could have covered more organizations but the available resources will place this limitation.

Another limitation of this study is the reluctance of respondents. The respondents targeted are likely to decline to give information with the fear that the particular information they give would be used as leverage against them. The researcher will deal with this problem by obtaining a letter of introduction from the University and will assure the respondents that the information obtained from them will be treated with utmost confidentiality and will only be used purely for academic purposes.

### **1.8 Delimitations of the Study**

This study focuses on the influence of demand and supply of real estate property for purchase in Nairobi County. Nairobi is the capital city of Kenya and the demand for housing is greatest in Nairobi than any other county in Kenya. The study looks at only four factors deemed as the critical influencers of demand and supply of real estate property for purchase in Nairobi County which include Price of real estate, Land availability, Economic situation and Demographic profiles. These four are the independent variables in this study.

### **1.9 Basic Assumptions of the Study**

This study assumes that there is a shortage of housing in Nairobi and that this shortage will be persistent until the supply of houses is able to meet the demand. Another assumption is that affordable and decent housing is beyond reach for a large percentage of Nairobi residents.

### **1.10 Definition of Significant Terms used in the study**

**Demand and Supply of real estate:** Fundamental economic concepts that describes the quantity of a product which a seller is willing and able to sell at a given price at a given time in a given market and describes a consumer's desire and willingness to pay a price for the property, holding all other factors constant

**Demographic profile:** These studies a population are factors such as sex, age, economic status, income level race, level of education and employment, among others.

**Economic situation:** It is the state of the economy in a country or region

**Land availability:** the accessibility of land that is committable or ready to be used upon demand to perform its designated or required function.

**Price of real estate:** The sum or amount of money or its equivalent for which any property is bought, sold, or offered for sale.

### **1.11 Organization of the Study**

This research is organized in five chapters. Chapter one provides a background on the need for housing, problem statement, purpose of the study, study objectives, research questions, significance of the study, limitation and delimitation of the study, assumption of the study and definition of significant terms used in the study.

Chapter two is the literature review and it covers roles of the factors mentioned above and how they influence demand and supply of real estate property in Nairobi County. It

also includes areas that have been addressed by various authors in tandem with the research objectives of the four factors herein and a summary of the literature review.

Chapter three outlines the research design, target population, sample size and sampling procedure, research instrument, piloting, validity of instruments, reliability of instruments, data collection methods, data analysis techniques, ethical considerations and operational definition of variables.

Chapter four looks into detail at data analysis, interpretation of the findings and presentation. It involves use of frequency tables, percentages, mean and standard deviations learnt in the course work of this degree to present data.

Chapter five of this study is a summary of findings, discussions, conclusions and recommendations by the researcher based on the objectives of the study. This chapter also presents suggestions for further studies that can be used by the researcher and other scholars.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section mentions some of the key ideas used in the research and shows precisely some theoretical contributions from the existing literature. Literature review helps to develop an understanding of the preceding research done that relates to the objectives; it also aims to refine ideas which this research is built.

Kenya's National Housing Policy has set clear objectives. However, the housing sector performance has not been monitored and evaluated effectively as set out. The monitoring and evaluation of the performance would look at the MLHUD's delivery in facilitating adequate shelter provision to Kenya's citizens. The Constitution of Kenya 2010, Article 43(b) states that every person has the right to accessible and adequate housing, and to reasonable standards of sanitation. However, despite the shortage of housing in the world and especially in developing countries, there is no MDG addressing this shortage. It is therefore every government's prerogative to ensure housing is sufficient for its people.

#### **2.2 The Concept of Supply and Demand of Real Estate Property**

The completed buildings on both the public and private sector in 2011 was KShs. 46.4Billion and KShs. 50.8Billion in 2012 showing a growth of 9.6% (Republic of Kenya, Economic Survey, 2013). According to the CBK data, the average home loan in 2012 was KShs. 6.4 million and it rose to KShs. 6.9 million in 2013. This rise can be attributed to among other factors high interest rates, expensive homes and upfront fees charged by financiers, valuers, developers' deposits and other consultants. Mortgage

lending was also on the rise year in year out in the years to 2013, the CBK data continues to show.

Nairobi was ranked the best performing property market in the world with 25 percent growth in property market (Knight Frank Wealth Report, 2012, pg 27). In 2013, the same report placed Nairobi in the 11<sup>th</sup> place, with 10 percent growth. A World Bank report of 2012 said that more than Two Hundred and Fifty Thousand people migrated from the rural areas to urban areas in search of education, employment and entrepreneurship opportunities in Kenya. The Kenyan Government in the previous regime under the leadership of the former President, His Excellency Mwai Kibaki and the former Prime Minister, His Excellency Raila Amolo Odinga concentrated on infrastructural development for example the Thika Super Highway, the Eastern, Northern and Southern bypasses. This further led to the rise of property prices.

It is important to note that in 2012, Housing Finance Corporation of Kenya issued a bond and raised KShs. 5.2Billion against a target of KShs. 2.9 Billion representing a 76 percent oversubscription in the 2<sup>nd</sup> tranche ([www.housing.co.ke](http://www.housing.co.ke)). Also, Shelter Afrique's KShs. 3.5Billion bond was oversubscribed by KShs. 1.5Billion in 2013 and they had to absorb the extra funds as they had that option. This was despite the volatility or uncertainty in the prevailing interest rates at that time.

Kenya's Building Code of 1969 is the code that is still operational. However, it has several challenges which include making it difficult to adopt new technology; it does not contain locally available building materials in Kenya specifically therefore allowing for the importation of substandard material. The 1969 Building code still uses the Imperial

Unit measurements while the country has gone metric and also places responsibility of approving building applications in the hands of one body which is the local authority (Macoloo, 1994). He further states that to understand the role of developers in the housing development, attention must be paid to the key housing components: land, finance, building materials, and labour and construction technology. Research findings by Ellis (2008) indicated that in the United States of America, real estate property market accounts for a about 33% of the country's wealth and about 11% of the Gross Domestic Product (GDP). Ellis further stated that real estate property market has many facets; and that it is both local and international. Prices are high in one season and low in a different season. The prices sellers ask for differ from season to season for example; prices in winter differ from prices in summer. Real Estate prices can be as a result of a situation or a perception of supply versus demand. Real estate property market can be referred to as a science, an emotion, a business and it is random. In the property market, there are several forces at work and several unseen forces leading to the asking price for a real estate property; land or house or development. Brophy (2010) says buyers and sellers try to outdo each other as buyers try to buy for as little as possible whereas sellers try to sell for as much as they can get. The two; buyer and seller finally settle on an agreeable price for both.

The report by USA Federal Reserve Board, states that real estate property represents the single largest asset category in the net worth portfolios of households. The 33 percent and over housing share downplays the importance of real estate for some households as direct investments are not included as household assets especially in private commercial real



estate assets (office buildings and apartments). Finally, it is important we note that 73 percent of household liabilities are home mortgages in the USA.

Guntermann and Norrbin (2010) direct attention to the fact that price of real estate in Ecuador has escalated in the recent past and this price escalation is likely to continue in the next decade. A 2-bedroom Condo in Quito, Ecuador capital city is normally priced below \$55,000. However, in the city Cuenca, which is also a city in Ecuador, a similar house would not more than less than \$40,000. This clearly indicates that prices of real estate property in Quito are more attractive to developers than in Cuenca city. A 1-bedroom furnished apartment in the affluent neighborhood of Cuenca city, located along the banks of river Tomebamba could be rented monthly at a rate of about \$350. However, prices in the countryside are much lower compared to these. For example, a 2.5acre piece of land in the areas like the valley of Longevity, with fresh water sources, several trees including fruit trees and a traditional 5-bedroom house was purchased for \$60,000 (Taylor, 2010). This clearly shows that an investment in the Ecuador real estate market for sale or rentals is likely to be a highly profitable venture to the developer.

In the past ten years, Africa has shown great interest in real estate property market. The property value of commercial real estate property is sometimes determined by value of current and future rents unlike the value of residential property which can provide accommodation to its owners and therefore has an intrinsic reservation value. The demand for real estate property is more likely to be influenced by the prevailing economic condition and the business environment. In addition, some unusual characteristics of the commercial real estate property market for example longer

construction time span, extended leases and the type of funding may make the property cycles of residential and commercial to show individual dynamic behaviour and to interact with the financial system and the real economy in different ways (Green, 2007). Tsolacos (2009) further points out that real estate property cycles may occur at different times across regions and sectors, and Wheaton (2009) notes that the different commercial property types may also have varying dynamics depending on the supply elasticity, development lags and the durability of the real estate assets.

In the history of real estate, Grenadier (2005) showed that the moment we have an ‘anticipated uncertainty’, developers increase their activity by building more or they hold vacant land with the prospects that its value continues to rise due to adjustment costs and this can be sold later at a higher price. Abrupt or abnormal price changes or volatility can cause similar effects of land holding or overbuilding. Such foreseeable uncertainty gives rise to strategic behavior by developers, where they use the information they get to build at the same time or hold together (Grenadier, 2008). Wheaton (2009) says that these cycles can also happen in the property market when everyone behaves rationally therefore doing away with the anticipated uncertainty based on some institutional features like longer leases and or the availability of credit lines which lead to over dependence on current property market prices of the property. When we have long leases, the prices include the past, current and forecasted rents since leases have varied lengths. For credit facilities, no-clarified information gives rise to a risk of default, showing that the current price is an important influence in the liquidation value.

Property prices are predominantly dependent on mortgage financing and hence the display of the strong link with the credit cycles. Barrell and Davis (2006) and Aoki et al (2002) considered the situation where the credit market is not perfect as a result of insufficient information between lenders and borrowers. Their models show that the conditions set for borrowers are ultimately dependent on the value of the property. When property prices fall, there is a downward spiral movement of the value of real estate hence financing institutions limit and ration mortgages. On the other hand, when land prices increase, we realize increased availability of mortgages or credit to borrowers hence boosting the demand for real estate assets..

The housing sector in Kenya has been characterized by lack of adequate affordable housing, low level of home ownership in urban areas and increased informal settlements. The National Housing Corporation (NHC) plays a big role in ensuring Kenya government policies and programs are implemented through various schemes. In the year 2008, NHC completed 3 number housing projects at a cost of Kenya Shillings One Hundred and Ninety Four Million, Eight Hundred Thousand(24 rental flats in Sadi infill, 38 maisonettes in Kiambu (Phase III) and 16 rental flats in Woodley infill in Nairobi, Nairobi). Six housing projects were constructed in the year ending 31st December 2009 that cost a total of Kenya Shillings One Billion, Three Hundred and Forty Million (Republic of Kenya, 2009).

In Kenya, the normal market mechanisms controlled by the forces of supply and demand. The lack of normal or ordinary market mechanisms prevent prospective buyers with irregular incomes from accessing finances. This group also includes those who cannot

participate in full time employment, those with disabilities and the elderly in the society. This group with irregular incomes includes those employed on short contracts and those in the informal sector sometimes referred to as "Jua Kali". According to Edwards (2007) an important factor that determines price of real estate property is the demographic change in a neighborhood, whether negative or positive. it is important to note that all areas undergo transformation, either by growth or decay and these severely affect the property value at the time of sale.

Real estate agencies in Kenya interact with thousands of visitors on their online portals to view the listed property with over 31,290 members who are registered and unregistered visitors surpass 30,000 monthly. This shows how large the interests of Kenyans are (RoK, 2009). This heavy traffic is able to signify the demand and supply of real estate property as both buyers and sellers flock this agency sites.

The private sector, particularly real estate developers are also playing key role in developing middle and high class estates that cater for the needs of the clientele. Erdemann is one of the private realtors that has been favored and praised as one of the best developers in the market, having done several real estate properties all over the country, particularly in major towns. In Nairobi County and the satellite towns around Nairobi, Erdemann has developed 9 estates that target different clientele. Erdemann targets the huge market of the middle income earning Kenyans. Most of its developments are strategically located and Erdemann normally builds infrastructure for example roads to these developments where there are nonexistent roads hence the naming of such roads

as Beijing Road and Shanghai Road, both in Mlolongo area. Other infrastructure will include sewer lines and water supply pipe line.

### **2.3 Price of Real Estate and Demand and Supply of Real Estate Property**

The real estate property market is a market that displays almost foreseeable cycles of booms and busts (Smith, 2010). Booms are periods when the market prices soar and these are more often than not followed by busts (periods when the prices plummet). Several people in the property market eke a living from these cycles. They take their time to understand the real estate market until they are able to tell with certainty when either a bust or a boom will happen thereby making a kill (Smith, 2010).

The price theory confirms that the price of a market shows how opposing considerations interact. The considerations for demand are based on marginal utility and the utility and the considerations for supply are based on marginal costs. To establish equilibrium, these two forces have to be equated so that marginal utility is similar to marginal cost (Jimmy, 2009). Horton (2010) says that we cannot have any two properties in the market that are identical even though some can be closely similar to allow for comparison. Therefore, the value of property can be reached by comparing current active listings and old listings. Expired listings also help to guide on the prices of property, these are properties that were advertised but were not sold.

Real estate varies in prices due to many factors according to Cahill (2010). There are three factors that have the greatest influence; number one is location. Normally, the nearer the land is to commercial centers or recognized spots, the more expensive it

becomes. Number two is accessibility. Building roads and other infrastructure is very costly same to maintenance and that is the reason why areas with good roads are priced higher areas with dirt roads. Number three factor is the developer. the more the popular the developer is, the more likely for him to charge a higher price for his property. Recognized developers like Erdemann can easily price their property above other smaller developers as they are known to invest more in infrastructure, they have great project management skills in terms of managing labour, materials and time to work in their favour to meet targets unlike the smaller or newer developers who only offer the real estate property (Cahill, 2010)

The prices of real estate property are normally determined by valuation using different approaches namely Rental income approach, Construction cost approach, and Market comparison analysis. In the Rental income approach, the property is valued by the amount of rental income that the property fetches. The higher the rental income, the higher will be the price for the property. The second method of valuation of property, Construction cost approach, is based on amounts spent when putting up the building or development, property that cost more to construct will definitely be priced higher as developers or developers are viewed as an economic man and therefore will seek a return on investment. Finally the market comparison analysis is where the price of property is determined by price of other real estate properties in the neighborhood, especially recently sold property of similar sizes and type. This helps to gauge at what range the prices of a property should be. An example is if a quarter acre is sold in the Central Business District for KShs. 100Million, most sellers will target to sell another quarter

acre in the CBD for the same KShs. 100Million if not higher. The above Three methods can be correlated and the best chosen (Omengo, 2013).

Edward (2010) says prices of real estate property vary from time to time. Buyers normally have the option of offering the seller a price less than what the seller is asking for. Real estate property prices are always negotiable unlike purchases done at retail outlets. When a buyer searches for a new home, he/she does it with the knowledge that he/she has the option to offer the seller less for the property than the asking price. Every aspect of a real estate purchase is negotiable. Sharpe (1999) says prices of real estate property are controlled by several factors like the potential buyer's income, the cost of putting up the building and the ability of a buyer to qualify for a mortgage. These factors influence how high up prices can rise before hitting resistance due to prices reaching levels where potential buyers who depend on borrowed money are unable to qualify (Sharpe, 1999).

On the other hand, Smith (2010) noted that price is all about location. He says it is always best for one to buy the worst house in a good neighborhood highly priced than the best house in a bad neighbor at a price which is low. One has to foresee his/her investment and decide what is best for him as the property owner.

Lack of affordable capital used is to be held responsible for the slow pace of property development. With a sharp decrease in interest rates and stable economic situation, the banks are willing to lend more, with fewer eligibility barriers, lower interest rates and longer repayment periods. In the recent past, there have been 3-year mortgage loans

available on the market, with interest rates as low as 15.6% and all the major banks consider mortgage finance as one of the most promising business loans. Meanwhile, construction firms and developers, too, can obtain working capital at much more affordable rates and secure the money borrowed using the title of property being developed as collateral.

#### **2.4 Land Availability and Demand and Supply of Real Estate Property**

Affordable housing shortages can relate to a lack of development opportunities and/or a lack of the means to realize opportunities. Whereas supply of land is not very problematic, getting the requisite land at a price that will allow for affordable development is a challenge. Developers who want to develop housing that is affordable to the masses are outbid by those who want to maximize profits. Most government planning systems have also favoured capitalistic development than socialist or low cost housing mainly seen by the fact that we lack clear policies that are fine grained to favour social housing over private housing.

Attitudes of various land owners also influence the land supply to enable them achieve developing houses that are affordable. Satsangi et al (2006) says that the interest of land owners to develop affordable housing on their land exists but not across board. Some of the main factors that constrain or limit land owners from developing their surplus lands include planning policies or zoning at 41%, lack of sufficient finances at 25%, lack of proper service provision at 18% and the remaining percentage a conglomeration of smaller factors. In Scotland, about every three in five land owners believe their areas had challenges to avail opportunities for low cost housing.



## **2.5 Economic Situation and Demand and Supply of Real Estate Property**

Developers, real estate consultants and service providers in Kenya enjoy the movement into the country by multinationals who are very instrumental in handling demand for the real estate which includes trying to meet the requirements for housing of expatriates who come to work in Kenya (RoK, 2009). Kenya has attracted developers from far and wide including from the Asian continent, especially China and India, and companies that do construction worldwide to increase Kenya's capacity in the real estate industry. For instance, the Kenya government has shown a great interest in working with the Asian economic giants (Okumu, 2010). Globalization has made local companies act as intermediaries, providing special skill and creating more opportunities for the multinationals due to lack of adequate capacity displayed by local firms.

In Kenya, the construction sector registered a 4.8% growth in 2012 up from 4.3% in 2011 (Republic of Kenya, Economic Survey, 2013) and mortgages increased by 36.2% from KShs. 50.8Billion to KShs. 69.2Billion in the year 2011 and 2012 respectively. This vigorous growth was largely supported by higher government allocation to infrastructure development in both roads and housing. The increased activity in construction has been very well highlighted in the consumption of cement over the past few years which grew from 2,155.8 thousand tonnes in 2008, 2,671.3 thousand tonnes in 2009, 3,104.8 thousand tonnes in 2010, 3,870.9 thousand tonnes in 2011 and finally 3937.3 thousand tonnes in 2012 (Statistical, 2013).

The prices of real estate property in Kenya have more than doubled and even tripled in some instances in the past decade (Majtenyi, 2010). The property market in Kenya has

flourished vigorously as a result of the increase in project financing and mortgages financing. Real estate markets are particularly complex because a number of economic and “extra-economic” factors go into the determination of economic outcomes. The fact that supply of real estate property is relatively inelastic and that these assets are fixed and not easily tradable show the uniqueness of the real estate market.

Several factors lead to increased need for the various categories of properties. Increase in the government revenues over the years through taxes in addition to working with development partners have enabled the government spend more on infrastructure like highways, bypasses, Standard Gauge Railway, bridges, dams and so on thus several areas are opened up provoking development. Increased spending by the upper middle class in the urban areas together with competition among the middle class, new attitudes towards home ownership have given rise to this boom. The rise in trade, both locally and internationally have contributed to the increase in demand for commercial spaces too.

Most real estate properties are debt financed and thus so much money goes towards interest payment monthly. Like rental expense, it would be beneficial if the mortgages grew the borrower's equity which is not the case. Loan facility fees, insurance, property maintenance charges and occasional upgrades are all add-ons to the property prices thus making the price of property more unbearable. However, many buyers forget to factor in these costs to the purchase price of the property they are buying (Conner & Halle, 2007).

A supply-side view argues that the bubbles in the real estate property market lead to improper resource allocation by building unnecessary structures in the hope that one will fetch more out of them thus a wasting labour, materials, time and land. this is because a

large number of unnecessary buildings deforms the industrial base thus leading to a large number who eventually suffer from a bust. This can easily result in a slump of the economy.

Economic bubbles first cause a boost in wealth which is temporary. A positive effect on wealth makes property owners feel richer therefore they spend more. On the contrary, when the prices slump, the wealth effect is negative thus the disposable income is reduced. These two effects could be balanced by a counter cycle fiscal and monetary policy ([en.wikipedia.org/wiki/Keynesian](http://en.wikipedia.org/wiki/Keynesian)). Secondly, property owners who purchased their property prior to the bubble and did not sell had their values balance out. However, owners who bought at low prices and sold at higher prices make profits. Those who lost money are those who bought when prices were higher and sold when prices were lower (Jimmy, 2010). This is what is referred to as wealth redistribution and is of little significance economically. In the post Keynesian economics, the bubbles and busts show credit bubbles as most property buyers and owners rely on mortgages to finance their purchases and the effects of these cycles will be felt. This easily leads to a crisis when there is a bust. We argue this empirically since most bubbles in the real estate market are then followed by busts showing a cause-effect association between the busts and bubbles (Hyman, 2009).

According to Allen and Wiant (2008) there are three main factors that give rise to the opportunities in the real estate market globally and especially in the economies that are emerging like Kenya. The first is the fast economic growth in such countries, alternating demographics and the off-shoring phenomenon. Because of the increased opportunities in

the developing economies, the widespread disintegration of real estate markets in developing economies, the fast growth of firms that are owned by individual families, inadequacy of professionals in the emerging economies. This however does not mean such economies are left behind as we have several state-of-the-art commercial and residential developments.

## **2.6 Demographic Profile and Demand and Supply of Real Estate Property**

In the developing countries, the demographic profile forecast available opportunities. Each household or family has an average of four or more persons thus leading to increased demand for more houses to house the population and because of the current capitalistic nature of most economies, there are more single households than the traditional extended families that would be housed together.

Approximately a half of the total wealth is in the real estate sector. The real estate sector is viewed as an indicator of stability, strength and independence. Due to the magnitude of the real estate sector, it takes a centre stage in setting the economic condition of a nation. Any fluctuations in the property value greatly affect one's wealth status especially for the business people. It also affects their ability to expand their businesses. A country's capacity to appeal to investors and sustain businesses to profitability or provide an enabling environment for businesses to thrive is greatly affected by the resources they allocate to infrastructure development and real estate sector (Mwithiga, 2010).

According to Edwards (2007) demographic changes affect prices in the real estate sector negatively and positively. Transformation, which is experienced worldwide, could be in two forms; decay and development. These two extremely affect property values at selling

time. Since demand of real estate property surpasses its supply, it attracts more investors into the market thus increasing the building activity and thus supply like what happened in South Africa between the years 2005 to 2008. This increased supply more often than not leads to oversupply in the market. When the market is unable to get buyers for the property, due to reasons such as unemployment, shortage of finances, increased debt levels, there is a reverse effect as the one seen in the South African market in the years mentioned above.

According to Torto (2008) firms in the real estate property market respond to the prospects in several ways. They move to developed economies where there exist economic and institutional structures like in the USA. In the recent years though, the trend to invest in the developing or emerging markets has grown too, thus opening up newer markets.

Most property buyers compare different properties by price and location. Buyers base their decision on personal tastes and preferences too, that is, what appeals to them and what they feel gives them the best value for their money in the market (Ellis, 2010). The age profile of the populace in the developed and emerging economies have great effect on the purchase of real estate. It is therefore not without any doubt that the age profile is considered when determining the property price. Appropriate pricing is necessary for all property and this is shown when selling agents and realtors avoid over-priced properties. This avoidance is seen as property owners end up asking for offers from their would-be buyers.

## **2.7 Theoretical Framework**

This study is grounded on conventional economic theory or the Neoclassical school of thought. This theory is based on a conception that every individual is rational. Following conventional economic theory, the demand for real estate space can be defined as the quantity of space or number of units demanded at various prices. The nature of real estate market makes it complex to apply an economic theory to it. Therefore, even if you got the difference, quantitatively of supply and demand, the analysis may not be appropriate as it will not show how decisions were reached in the market. This can be confirmed in decisions regarding location as normally it is of temporary nature depending on the prevailing needs or circumstances of the buyer for example the distance from work, school for children and so on.

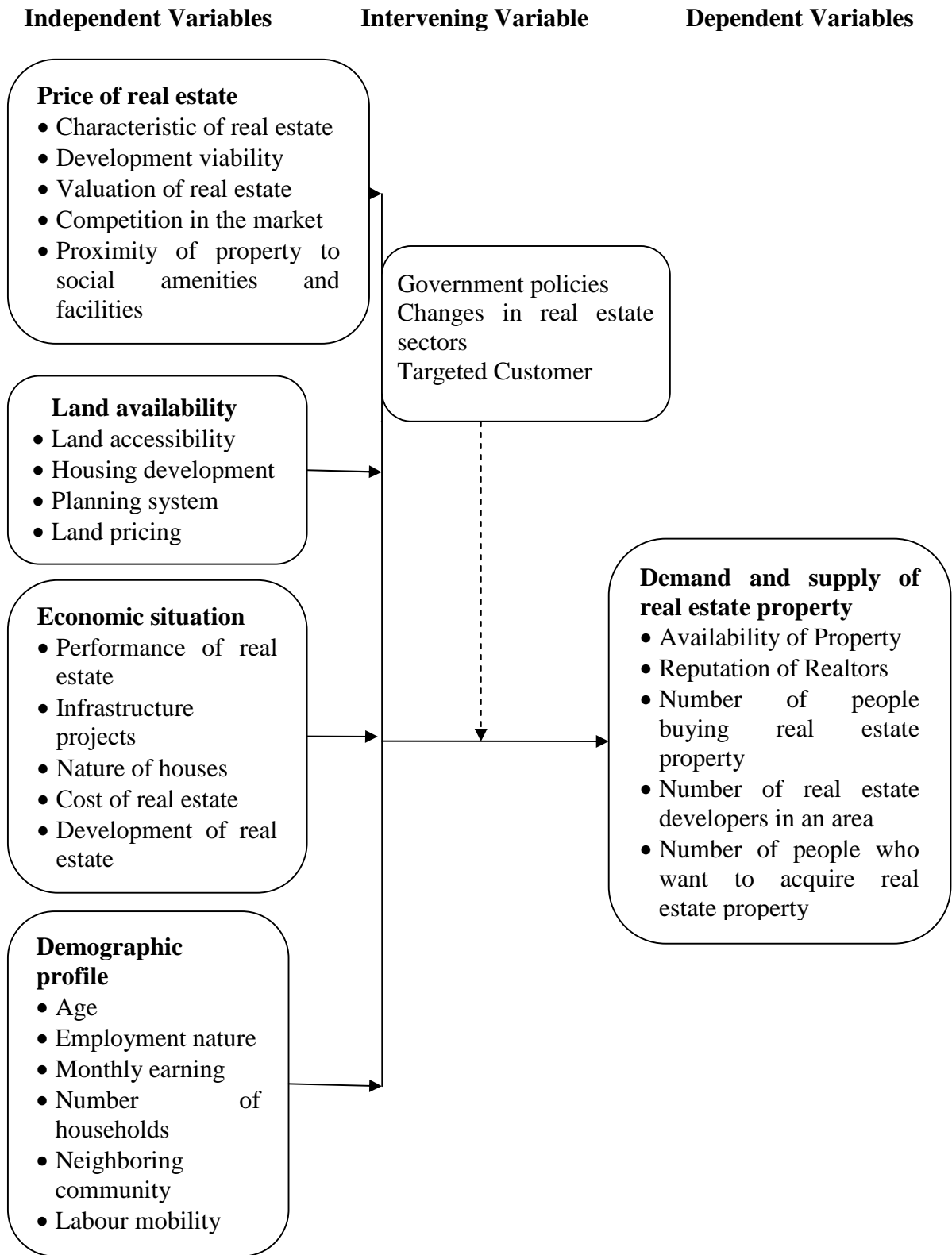
Competition in the real estate market forces both suppliers and buyers to respond appropriately. Considerations of trends that shape the competitive field and innovations brought about by technological transfers greatly alter the demand functions which cause effects on the activity in the property market.

Despite the difficulties of attaching the economic theories to the real estate market, the market is an institution where ability to pay all debts is key to success in the long term. Intervening variables together with other non-economic deliberations have to be considered as part of the equation. These non-economic considerations emphasize the need to apply solutions that are market based to elements like sustainability and managing growth. During the evaluation of the supply of real estate property, it is necessary to categorize the property into classes that have almost similar pushers of

demand in the market. The property market, like any other market is under the forces of supply and demand laws and thus the prices are determined by the supply and demand factors. When demand exceeds (relatively fixed) supply, the price rises, according to standard economic theory and vice versa. When defining demand, we incorporate effective demand which is defined as demand supported by the power to purchase. Some instances require that the real estate property market analysis may require the need to concentrate on ex-ante demand and not the actual demand. This refers to the consolidated quantity of real estate property desired before the interaction in the market place with consumers. After the interaction, the ex-post demand may be different due to several factors like the constraints of supply.

## **2.8 Conceptual Framework**

Conceptual framework refers to the principal frame that gives shape to the complete system, holds up and sustains other components in a reasonable or expected arrangement. In this research, we look at the phenomenon under study accompanied by diagrammatic depiction of the variables under study (Mugenda, 2008). The independent variables include price, demographic profile, economic situation and land availability while the dependent variable is demand and supply of real estate property. the intervening variables, also known as moderating variables of government policies, changes in the real estate sector and the targeted customer will not be measured in this current research, are conceptualized as influencing the association between the independent variables and the dependent variables in different ways, among them interference with resource allocation, personal tastes and preferences and such like.



**Figure 1: Conceptual Framework**



## 2.8 Research Gap

Variable	Researcher, (year)	Title of the study	Findings	Gap in knowledge
Demographic profile	Megbolugbe, Marks & Schwartz (2001)	The Economic Theory of Real Property Demand.	<p>The demand of real estate is sustained by determinants such demographic factors which change rapidly depending on individual income and social status.</p> <p>The stock of dwelling units, which is relatively inelastic with respect to changes in price, also determines the long-run movement of housing prices.</p>	The study only concentrated on four independent variables leaving a gap which this study aims to bridges.
Price	Tze San Ong, (2013)	Factors Affecting the Price of Real Estate Properties in Malaysia.	The paper provides empirical results that the gross domestic product (GDP), population and RPGT are the key determinants of housing prices.	This study concentrated on Factors Affecting the Price of Real Estate Properties in Malaysia and only focus on inflation rate, interest rate and GDP leaving a research gap to be filled by focusing on developing country which this study aims to bridge.

<b>Variable</b>	<b>Researcher, (year)</b>	<b>Title of the study</b>	<b>Findings</b>	<b>Gap in knowledge</b>
Land availability	Chomba, J. M. (1999)	An assessment of the real estate prices in the urban areas of Kenya with special reference to commercial buildings in Nairobi	He found that demand level, land availability and location of the real estate determines the price of the real estate for commercial buildings	Though the study focus on real estate did not expound on the factors that influencing demand and supply of the real estate in Kenya hence the current study aims to identify those factors and enhance the literature on real estate.
Economic performance	Murigu, J. (2005).	An analysis of the decision making criteria for investing in commercial real estate in Kenya	The study found that demand and profitability were major factors influencing decision making criteria for investment in commercial real estate in Kenya	The study did not indicate factors influencing demand and supply of real estate in Kenya.

## **2.9 Summary of Literature Review**

This chapter looked at in the literature review which included the discussion of previous studies done by other scholars in relation to demand and supply of real estate property.

We note that there are several factors that lead to settling on a price for a property and some of these factors are unseen. Grenadier (2005) showed that if there is “anticipated uncertainty”, overbuilding could occur because there is an option value of holding vacant space due to adjustment costs. The housing sector in Kenya has been characterized by inadequacy of affordable and decent housing, low level of urban home ownership, extensive and inappropriate dwelling units, including slums and squatter settlements.

From the available literature, the location is seen as having the most effect on the price of real estate property. Prices are also affected by the developers of the real estate where some developers have 'better names'. Investment opportunities have been opened up in the developing or emerging economies by globalization.

This chapter also presented theoretical review; the study is grounded on the study of conventional economic theory or the Neo-classical theory which convincingly explains the rationality of most decisions in the purchase or sale of the real estate property. Further, this chapter showed the conceptual framework which explained the association of the independent and dependent variables. Finally, this research shows the study gap that it intends to bridge.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the methodology to be used in this research. It includes research design, target population, sample size and sampling procedure, research instruments used, reliability of the research instruments, data analysis procedures, the ethical considerations and the operational definition of variables.

#### **3.2 Research design**

This is an arrangement of conditions and data analysis that combines the relationship to the research purpose (Chandran, 2004). Descriptive research will be the design used in this research proposal. This is because it enables generalization of findings of the study to a larger population. Descriptive research also tests specific hypotheses and examines prevailing status to answer research questions. Cooper and Schindler (2004), says descriptive research finds out Where, How and What of a philosophy or fact. This study therefore was able to generalize the findings to most realtors in Nairobi County.

This study adopted quantitative research methodology often used in such a study. In this methodology, data that describe events is gathered and then organized, tabulated and the collection procedures properly described. Its appropriateness is because the involved variables are not manipulated to establish the prevailing condition (Borg and Gail, 2003).

#### **3.3 Target Population**

This is the exact group about which the desire for information is directed. Ngechu (2004), says a population is described as an entire set of relevant units that are under investigation or analysis. In this research, our target population is managers and directors

of Erdemann Property Limited. According to the Ministry of Housing (2013) Erdemann Property Limited has 14 real estates in Nairobi County. These estates are subdivided into two, that is, residential and commercial where 9 are residential while the other 5 are commercial with 28 management staff.

### **3.4 Sample Size and Sampling Procedure**

This section describes the sample size which is a subset of the total population that is used to give the general views of the target population (Kothari 2004). It determines the sample size and sampling procedure.

#### **3.4.1 Sample Size**

Sample size is finite part of a statistical population whose properties are studied to gain information about the whole population. A statement made regarding the sample will be a representation of the population. The sampling error is reduced by having a larger sample. Where external validity is important, one needs to carry out purposive sampling from properly defined population. Mugenda and Mugenda (2003) states that a sample of 30% and above is considered appropriate for a population of less than 500 units.

#### **3.4.2 Sampling Technique**

For this study simple random sampling technique was employed to select a sample of 8 respondents. This represents about 30% of the total population. A sample size of 30% is justified since it minimizes the duplicity and redundancy of the data to be obtained Mugenda and Mugenda (2003) which further states it is within the range of 10% to 40% which is considered representative.

### **3.5 Research Instruments**

The researcher collected primary data for the purpose of investigating the influence of demand and supply of real estate property in Nairobi County. To collect primary data, the study used a questionnaire to collect data from the respondents targeted. A questionnaire is defined as set of carefully designed questions given in the same order to respondents to enable gathering of data that is of the researcher's interest (McLean, 2006).

The questionnaire had two distinct sections. Section One and Section Two which will be divided into five parts. Section One sought to gather general information from the respondents; Section Two had Five parts and sought answers concerning Demand and Supply of Real Estate Property. Part One sought to know the relationship of the Price and Demand and Supply of Real Estate Property, Part Two was about land availability and Demand and Supply of Real estate Property, Part Three was on economic situation and Demand and Supply of Real Estate Property, part Four was on demographic profile and demand and supply of real estate property and part Five was on demand and supply of real estate property. The questionnaires were administered by the researcher with assistance of one research assistant.

Appropriateness of questionnaires for studies come in as information collected can not be observed directly since they sometimes ask about attitudes, emotions, experiences and observations of individuals (Mellenbergh, 2008). Saunders, (2003) stated the advantages of a questionnaire as tools of collecting data: less expensive, respondents do not feel any manipulation when giving information and finally, less time consuming. The questionnaire was designed to be in line with the research objectives.

### **3.5.1 Piloting of the Instruments**

Piloting is a small experiment that is designed to test the logistics and collect information before the main study. It helps identify vagueness of questions for possible review to make them relevant to all respondents (Mugenda & Mugenda, 2003). For this study, the pilot sample consisted of 1 management staff from Erdemann Property Limited chosen through random sampling. Mugenda and Mugenda (2003) suggested the pilot sample should range between 1% - 10% of total sample to be studied.

### **3.5.2 Validity of Research Instruments**

This checks that the gathering instrument truly measures that which it is intended to measure (Joppe, 2009). Creswell (2008) says validity of the instrument is when the researcher is able to get meaningful inferences from the instrument. The instrument was checked by the supervisor of the researcher and the peers before the study. Content validity shows two things: one is that it is a logical observation if the instrument covers everything it is meant to and two is that if the respondents get to understand the questionnaire items.

### **3.5.3 Reliability of Research Instruments**

This measures the degree of the instruments' consistency after trials are repeated. It ensures that the results obtained are stable over time when we administer the instrument repeatedly (Creswell, 2003). A researcher ensuring reliability uses a technique known as the split-half technique. This technique calculates the coefficient of reliability and it ranges between 0.7 to 1. The formula used is Spearman-Brown coefficient formula (Nachmias & Nachmias 1996).

$$\text{Reliability of the overall test} = \frac{2 \times \text{reliability of } \frac{1}{2} \text{ tests}}{1 + \text{reliability of } \frac{1}{2} \text{ tests}}$$

we calculate the coefficient of correlation for two score sets when we score two halves of the tests separately for each person. Responses are split into odd numbers for one set and the even numbers for the other set of items.

### **3.6 Data Collection Procedures**

Upon obtaining consent from the University of Nairobi for data collection, the researcher engaged one research assistant with whom to work within the process of collecting data. The research assistant was made to understand the need for the study, the instruments used in the research, the purpose of this study and also the ethics part. The questionnaires were administered by face to face to the respondents.

### **3.7 Data Analysis Technique**

The completed questionnaires were edited to ensure they were complete before the responses were processed. Coding of data was then done enabling categorization of the responses. An analysis of the quantitative data collected was done descriptively. SPSS which is a descriptive statistical tool enabled the researcher describe the data and in determining the various extents to which it was used. Findings were arrived at after analysis and these were presented by central tendencies which included mean, percentages, charts and tabulations to generate quantitative reports and for any further analysis.



### 3.8 Ethical Consideration

Before the study began, permission was sought by getting a letter of recognition from the University and the realtors' management were also be informed of the study in order to ensure the study follows principles. The five principles guiding ethics in research are scientific merit, equitable selection of subjects, seeking informed consent, confidentiality and avoidance of coercion. Prior to collecting information from the respondents, the researcher explained to the respondents the objectives of the study, and how the findings would help them, Nairobi County and the country at large.

### 3.9 Operational Definition of Variables

The operationalization of variables is as shown in table 3.1;

**Table 3.1 Operationalization of variables**

Objectives	Independent Variables	Indicators	Measurement Scale	Type of analysis	Tools of analysis
To establish how price influences demand and supply of real estate property in Nairobi County	Price of Real Estate	• Characteristic of real estate	Nominal	Descriptive Regression	Frequency distribution tables, Tabulation & percentages
		• Development viability	Nominal		
		• Valuation of real estate	Ordinal		
		• Competition in the market	Nominal		
		• Proximity of property	Nominal		

<b>Objectives</b>	<b>Independent Variables</b>	<b>Indicators</b>	<b>Measurement Scale</b>	<b>Type of analysis</b>	<b>Tools of analysis</b>
To assess how demographic profile influences demand and supply of real estate property in Nairobi	Demographic profile	• Age	Ordinal	Regression	Frequency distribution tables & percentages
		• Employment nature	Nominal		
		• Monthly earning	Ordinal		
		• Number of household	Ordinal		
		• Neighboring community	Ordinal		
		• Labour mobility	Ordinal		
<b>Objectives</b>	<b>Independent Variables</b>	<b>Indicators</b>	<b>Measurement Scale</b>	<b>Type of analysis</b>	<b>Tools of analysis</b>
To determine how Land availability influences demand and supply of real estate property in Nairobi County	Land availability	• Land accessibility	Nominal	Regression	Frequency distribution tables, Tabulation & percentages
		• Housing Development	Nominal		
		• Planning System	Nominal		
		• Land Pricing	Ordinal		
<b>Objectives</b>	<b>Independent Variables</b>	<b>Indicators</b>	<b>Measurement Scale</b>	<b>Type of analysis</b>	<b>Tools of analysis</b>
To determine how the Economic situation influences demand and supply of real estate property in Nairobi County	Economic Situation	• Performance of Real Estate	Nominal	Regression	Frequency distribution tables, Tabulation & percentages
		• Infrastructure Projects	Nominal		
		• Nature of Houses	Nominal		
		• Construction Costs	Ordinal		
		• Development of real estate	Nominal		

## CHAPTER FOUR

### DATA ANALYSIS, INTERPRETATION AND PRESENTATION

#### 4.1 Introduction

This chapter presents an analysis of the study and the findings based on the methodology stated earlier and data collected from the respondents. The study employs various statistical tools (SPSS & MS. Excel) in extracting factors influencing demand and supply of real estate property. Data was collected using a questionnaire as the instrument of research. The objectives of the study helped in the generation of the questionnaire.

#### 4.2 Questionnaire Return Rate

Response rate refers to the degree of inclusion of all sample units in the final data. Its calculation is done by taking the number of those who completed the interview over the total sample. This study had 8 sample units from a population of 28 that was targeted. The questionnaire return rate results are shown in Table 4.1. Out of the 8 sampled, 7 respondents completed the questionnaire which is 88%. This is an excellent percentage as explained by Mugenda and Mugenda (1999) that over 70% is an excellent return rate, between 60% to 70% is good and between 50% to 60% is adequate.

**Table 4.1 Response Rate of Respondents**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Responded	7	88
Non response	1	12
<b>Total</b>	<b>8</b>	<b>100</b>

### 4.2.1 Pilot Test

The researcher carried out a pilot study to pretest the validity and reliability of data collected using the questionnaire. Cronbach's Alpha was used in the evaluation of the questionnaire. It measures consistency as it shows if two test measures similar constructs, even if the research would be done again later. The pilot study done showed that questions on economic situation had the greatest reliability ( $\alpha = 0.802$ ). Number two was demographic profile where  $\alpha = 0.751$ , land availability came next with  $\alpha = 0.723$ , and last was price where  $\alpha = 0.713$  in that order. This therefore means that of the four scales used, all proved to be reliable as they ranged between 0.7 to 1 as shown in table 4.2 below.

**Table 4.2 Reliability Coefficients**

Scale	Cronbach's Alpha	Number of Items
Price	0.713	12
Land availability	0.723	11
Economic situation	0.802	12
Demographic profile	0.751	19

### 4.3 Demographic Characterization of the Respondents

#### 4.3.1 Gender of the Respondents

Table 4.3 below shows the gender balance of the respondents. Majority (57%) was male and the minority (43%) was female. This shows more males than females work in the real estate firms and thus the response is not biased.

**Table 4.3 Distribution of Respondents by Gender**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	4	57
Female	3	43
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.3.2 Position Held by the respondents**

The study aimed to investigate position held by the respondents within their department. From the findings, majority (29%) of the respondents were residential premises manager and directors as shown in each case. Fourteen percent (14%) were management staffs, commercial premises managers and directors respectively. This depicts that all participants of the study were under the level at which the study targeted as stipulated in chapter three.

**Table 4.4 Distribution of respondents by the Position Held**

	<b>Frequency</b>	<b>Percentage</b>
Management staffs	1	14
Residential premises manager	2	29
Commercial premises manager	1	14
Directors	2	29
Supervisors	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.3.3 Working Duration**

Table 4.5 below shows the number of years the respondents have worked for the organization. Majority (43%) had worked for between 6-10 years, 29% between 1-5years, 14% between 10-15 years and the remaining 14% had over 16 years at the organization. This implies that most of the respondents of this study had worked for adequate time

within the organization thus they were conversant of the information that the study sought pertaining to the organization.

**Table 4.5 Distribution of respondents by Duration Worked at EPL**

	<b>Frequency</b>	<b>Percentage</b>
1- 5 years	2	29
6 – 10Years	3	43
10 – 15Years	1	14
Above 16Years	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.3.4 Education Level of the Respondents**

The study asked the respondents their level of formal education. Table 4.6 shows the results obtained: Twenty Nine (29%) had post graduate qualifications and diplomas, Fourteen (14%) were graduate, certificate and primary level each. This depicted that most of the respondents interviewed were well knowledgeable to understand and able to respond to the questionnaire in the manner intended.

**Table 4.6 Distribution of respondents by the Education Level**

	<b>Frequency</b>	<b>Percentage</b>
Post Graduate	2	29
Graduate	1	14
Diploma	2	29
Certificate	1	14
Primary level	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.3.5 Adequacy of Agreement between Sellers and Buyers on Real Estate Transactions to buyers**

The researcher was also inquisitive to investigate whether the agreement contract between sellers and buyers on real estate transactions protected the interest of their customers. All 100% (7) of the respondent indicated that there is agreement contract between sellers and buyers on real estate transactions which protects customers' interests.

#### **4.3.6 Agreement between Landlords and Tenants**

Respondents were to state whether the agreement between landlords and tenants that protects the concerns of tenants is adequate. From the findings, 100% (7) of the respondents pointed that there is agreement between landlords and tenants that protects the interest of tenants during use of the premises. Sixty percent (60%) of the respondents felt that the agreement adequately meets tenants expectations with 40% of the respondents indicated that the agreement does not meet customers' expectations.

#### **4.4 Price and Demand and Supply of Real Estate Property**

The real estate property market has characteristics of predictability of the booms and bust cycles.

##### **4.4.1 Nature of Real Estate you Sell or Manage**

Table 4.7 shows the finding of the study on the influence of price on demand and supply of real estate property. Majority (57%) of the respondents indicated that they sell and manage both rental and commercial real estate, 29% of the respondents indicated that they sell and manage rental premises only while 14% sell and manage commercial promises only.

**Table 4.7 Distribution of respondents by Nature of Real Estate managed or sold**

	Frequency	Percentage
Rental	2	29
Commercial	1	14
Both	4	57
<b>Total</b>	<b>7</b>	<b>100</b>

#### 4.4.2 Average Selling Price of Properties

The study also sought to investigate the selling price of properties. From the findings, most (43%) of the respondent indicated that EPL sell its real estate properties between KShs. 4M to KShs. 6M, 29% indicated that they sell properties less than KShs. 4M, 14% between KShs. 6M to KShs. 10M and 14% sell above KShs. 10M.

**Table 4.8 Distribution of respondents by the knowledge of Average Selling Price per unit**

	Frequency	Percentage
Less than KShs. 4M	2	29
Between KShs. 4M to KShs. 6M	3	43
Between KShs. 6M to KShs. 10M	1	14
Above KShs. 10M	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### 4.4.3 Monthly Rental Fees for Property Per Unit

Table 4.9 shows the monthly rental fees for rental property per unit. The study findings show that 43% indicated that the monthly average rental for a property per unit is KShs.25,000-KShs.50,000, 29% said it ranges between KShs.50,000-KShs.100,000, 14% indicated that the rental fees is Less than KShs.25,000 while the rest 14% pointed that they charge rent more than KShs.100,000.



**Table 4.9 Distribution of respondents by the knowledge of Monthly Rental Fees per Unit**

	<b>Frequency</b>	<b>Percentage</b>
Less than KShs.25,000	1	14
KShs.25,000- KShs.50,000	3	43
KShs.50,000- KShs.100,000	2	29
Above KShs.100,000	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.4.4 Influence of Price on Demand and Supply of Real Estate**

Table 4.10 shows the findings on the respondent agreement level on aspects related to influence of price on demand and supply of real estate. Most respondents agreed that competition for limited key resources and abrupt price increases of building materials has led to high costs of housing shown by mean score of 4.01. The respondents agreed that people experience challenges when looking for a right place at a reasonable price and that neighboring property influence the pricing of housing in an area as illustrated by mean score of 3.96 and 3.81 respectively. Respondents also agreed that price volatility causes an option value of holding vacant space due to fear of unstable prices costs and that when land prices increase, there is a tendency for financiers to avail more funds for borrowing thus boosting demand as depicted by mean score of 3.77 and 3.71 respectively. When there is frenzy buying of property, prices are driven up forcing most sellers to off-load in the current market, resulting to high price of the market demand and that technological change such as online marketing have reduced cost of operation hence boosting supply and help meets clientele demand as depicted by mean respective score of 3.67 and 3.64. Respondents further agreed that high demand by high class individual has resulted to

high price of housing and that demand for real estate is likely to be affected by the environment it operates and the economic confidence as illustrated by mean score of 3.56 and 3.52 respectively. Finally, respondent were neutral that increased demand by middle class clientele has resulted to property price increase as shown by mean score of 3.18.

**Table 4.10 Influence of Price on Demand and Supply of Real Estate**

	<b>Mean</b>	<b>STDev</b>
Demand for real estate property is more likely to be affected by the business environment and economic confidence	3.52	1.168
Price volatility causes an option value of holding vacant space due to fear of adjustment costs.	3.77	1.297
Increases in land prices lower the external finance premium and improve credit availability for borrowers, hence boosting the demand for real estate assets and driving property prices even higher	3.71	1.198
Competition for limited key resources and sharp increases in the price of some building materials has led to high costs of housing	4.01	0.096
Technological change such as online marketing have reduced cost of operation hence boosting supply and help meets clientele demand	3.64	1.284
When there is frenzy buying of property, prices are driven up forcing most sellers to off-load in the current market, resulting to high price of the market demand	3.67	1.131
High demand by high class individual has resulted to high price of housing	3.56	0.913
Increased demand by middle class clientele has resulted to property price increase	3.18	0.948
Neighboring property influence the pricing of housing in an area	3.81	0.128
People experience challenges when looking for a right place at a reasonable price	3.96	0.315

#### **4.4.5 Extent that Price of Housing Influence Demand and Supply of Real Estate**

Table 4.11 illustrates the findings of the study on the extent that price of housing influences demand and supply of real estate properties. Majority (57%) of the respondents purported that price of housing influences demand and supply of real estate to a great extent, 29% were of the opinion that price of housing influence demand and supply of real estate property to a very great extent, and 14% opined that price of housing influence demand and supply of real estate to a moderate extent.

**Table 4.11 Distribution of respondents by effect of House Price on Demand and Supply of Real Estate Property**

	<b>Frequency</b>	<b>Percentage</b>
To a very great extent	2	29
To a great extent	4	57
To a moderate extent	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.5 Land Availability and Demand and Supply of Real Estate Property**

Affordable housing shortage relates to a lack of development opportunities and/or a lack of the means to realize opportunities.

##### **4.5.1 Availability of Land on Supply and Demand of Real Estate**

The study requested the respondents to indicate whether availability of land influences supply and demand of real estate properties. From the findings, all (100%) pointed that availability of land influences supply and demand of real estate properties. Most of the land available in Nairobi County for housing developed ranges from 50-100ft by 40-60ft. In addition, majority (60%) of the respondents indicated that they find it difficult to access land for building while the rest (40%) indicated that they would find it easy to access the land for developing.

#### 4.5.2 Aspects of Land Availability on Demand and Supply of Real Estate Properties

The respondents were requested to show their agreement level on assertions relating to influence of land availability on demand and supply of real estate properties. Most of the respondents agreed that land supply in general, land supply may not be very problematic but getting land at the right price which allows development of affordable housing is a big challenge and that high cost of land in areas profiled as prime lands hinders real estate developers to meet the demand of the housing as depicted by mean score of 3.84 and 3.83 respectively. Respondents also agreed that banks of private developers like Erdemann have favored housing developments with faster return rates over affordable housing. There is a shortage of opportunities of development and shortage of means to realize these opportunities and that shortage of land at fairly lower price increases the demand for real estate as shown by mean score of 3.67, 3.63 and 3.61 respectively. Further respondents agreed that it is difficult to acquire adequate real estate through normal market mechanisms and that property developers are unable to develop adequate real estate due to lack of suitably priced lands as illustrated by mean score of 3.56 and 3.51 respectively. Finally, respondents were neutral that landowner interest in developing low cost housing is low as developers will not anticipate quick returns as shown by a mean score of 3.45.

**Table 4.12 Land Availability on Demand and Supply of Real Estate Properties**

	Mean	STDev
Land supply in general may not be too problematic, obtaining land at a price that makes affordable housing development is a big challenge	3.84	0.746
There is a lack of development opportunities and/or a lack of the means to realize opportunities	3.63	0.808

Banks of private developers like Erdemann have favored housing developments with faster returns over affordable housing	3.67	1.131
It is difficult to acquire adequate real estate through normal market mechanisms	3.56	0.913
Property developers are unable to developed adequate real estate due to lack of suitably priced lands	3.51	0.948
High cost of land in areas profiled as prime lands hinders real estate developers to meet the demand of the housing	3.83	0.746
Shortage of land at fairly lower price increases the demand for real estate	3.61	0.808
Landowner interest in developing low cost housing is low as developers will not anticipate quick returns	3.45	0.348

#### **4.5.3 Extent that Availability of Land influences Demand and Supply of Real Estate**

The study further requested the respondents to indicate the extent to which availability of land influence demand and supply of real estate. From the findings, 57% of the respondents opined that availability of land influence demand and supply of real estate to great extent, 29% were of the opinion that availability of land influence demand and supply of real estate to a very great extent while 14% of the respondents indicated that availability of land influence demand and supply of real estate to a moderate extent..

**Table 4.13 Distribution of respondents on the extent to which Land Availability influences Demand and Supply**

	<b>Frequency</b>	<b>Percentage</b>
To a very great extent	2	29
To a great extent	4	57
To a moderate extent	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.6 Economic Situation and Demand and Supply of Real Estate Property**

In Kenya, the robust growth in real estate property is supported largely by increased capital investment in supporting infrastructure especially roads. It is from this realization that the study aimed to investigate the influence of economic situation on demand and supply of real estate.

##### **4.6.1 Influence of Economic Situation Demand and Supply of Real Estate Property**

Respondents were also requested to indicate whether economic situation influence demand and supply of real estate property. All (100%) respondents opined that economic situation influences demand and supply of real estate property. On whether economic situation within the country favor real estate sector, majority (71%) of the respondents indicated that economic situation within the country favors real estate sector while 29% had a contrary opinion compared to the majority.

##### **4.6.2 Performance of Real Estate**

Table 4.14 shows the findings of the study on the performance of real estate sector for the last five years in relation to the economic situation of the country. Majority (57%) of the respondents rate performance of real estate sector as good and 43% felt the performance of real estate sector in relation to the economic situation of the country to be average.

**Table 4.14 Distribution of respondents by their view on Performance of Real Estate**

	<b>Frequency</b>	<b>Percentage</b>
Good	4	57
Average	3	43
<b>Total</b>	<b>7</b>	<b>100</b>

### 4.6.3 Economic Situation on Demand and Supply of Real Estate Properties

The respondents were requested to show their agreement level on the statement relating to influence of economic situation on demand and supply of real estate properties. The findings show that many of the respondents strongly agree that statutory charges, mandatory charges like insurance and property upgrades limit the demand and supply of real estate property, development of more infrastructure projects have increased demand of real estate and that increase in real estate developers in the market lowers the price of housing and commercial real estate as depicted by mean score of 4.66, 4.63 and 4.61. Respondents also agreed that they consider any additional costs as part of the price when they are to purchase or rent a property. Increased disposable income, especially with the urbanized upper middle-classes, and new consumer attitudes spur a retail boom in real estate sector, high taxes by the government have reduced the purchasing power for real estate property and that local and international trade have led to increased demand for commercial space, as well as improvements in existing and construction of new modern houses as shown by a mean score of 4.47, 4.37, 4.24 and 4.15 respectively.

**Table 4.15 Economic Situation on Demand and Supply of Real Estate Properties**

	Mean	STDev
High taxes by the government have reduced the purchasing power for real estate property	4.24	0.066
Development in many infrastructure projects, such as highways, dams, bridges have increased demand of real estate	4.63	0.633
Greater disposable incomes, at least in a certain segment of the urbanized upper middle-classes, and emergent consumerist attitudes have spurred a retail boom in real estate sector	4.37	0.583

Internal and external trade have led to increased demand for warehousing space, as well as improvements in existing and construction of new modern houses	4.15	0.786
Property taxes, property insurance, mortgage fee and insurance, regular maintenance and sporadic upgrades, higher utilities limits the demand and supply of real estate property	4.66	0.477
I consider any costs as part of the price when I am setting out to purchase or rent a piece of real estate	4.47	0.593
Increase in real estate developers in the market lowers the price of housing and commercial real estates	4.61	0.557

#### **4.6.4 Extent that Economic Situation influence Demand and Supply of Real Estate**

Table 4.16 illustrates the findings of the study on the extent to which extent economic situation influence demand and supply of real estate. Majority (57%) of the respondents purported that economic situation influence demand and supply of real estate to a great extent, 29% to a very great extent while the rest 14% were of the opinion that economic situation influence demand and supply of real estate to a moderate extent.

**Table 4.16 Distribution of respondents on influence of Economic Situation on Demand and Supply of Real Estate**

	<b>Frequency</b>	<b>Percentage</b>
Very great extent	2	29
Great extent	4	57
Moderate extent	1	14
<b>Total</b>	<b>7</b>	<b>100</b>



#### **4.7 Demographic Profile and Demand and Supply of Real Estate Property**

The demographic profile suggests future opportunities in the developing countries. Household size, for example, is related to several factors which include cultural orientation, history and income levels.

##### **4.7.1 Aspects of Demographic Profile on Demand and Supply of Real Estate Properties**

The researcher requested the respondents to indicate their level of agreement on the statements that relate to influence of demographic profile on demand and supply of real estate property. It is noted that when there is increased demand for real estate property in an area, more buildings are built rapidly thus accelerated growth in supply of property in that area and that clients considered housing due to appropriate pricing and in comparison with other houses in the neighborhood as shown by a mean score of 4.77 and 4.15 respectively. Further respondents pointed that transformation and growth of infrastructure in an area raises the value of a property and that clients considered residing in an area due to labour mobility as depicted by mean score of 3.74 and 3.73 respectively. The price of property increases as people are willing to purchase at a higher price rather than risk no purchase at all as indicated by mean score of 3.66.

**Table 4.17 Aspects of Demographic Profile on Demand and Supply of Real Estate Properties**

	<b>Mean</b>	<b>STDev</b>
When there is increased demand for real estate property in an area, it leads to the building of more housing developments and accelerated growth in supply of property in that area	4.77	0.422

Transformation and growth of infrastructure in an area raises the value of a property	3.74	1.041
The price of homes and rentals usually increases as people are willing to purchase at a higher price rather than risk no purchase at all	3.66	1.133
Selection of a house is typically based on what appeals to personal tastes but also what is felt as the best value based on all of the houses seen by the client	3.47	0.899
Clients considered housing due to appropriately pricing and in comparison with other houses in the neighborhood	4.15	1.009
Clients considered residing in an area due to labour mobility	3.73	0.87

#### **4.7.2 Extent to which Price of Mortgage influences Purchase Rate of Real Estate property**

Table 4.18 shows distribution of respondents based on the view to the extent to which price of mortgages influence the purchase rate of real estate property. Results of the findings on the extent shows that majority (57%) of the respondents were of the opinion that price of mortgage influence demand and supply of real estate to a great extent, 29% purported that price of mortgage influence demand and supply of real estate to a very great extent while 14% alleged that price of mortgage influence demand and supply of real estate to a moderate extent.

**Table 4.18 Distribution of respondents on influence of Price of Mortgage Product and Purchase Rate**

	Frequency	Percentage
Great extent	4	57
Very great extent	2	29
Moderate extent	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.8 Demand and Supply of Real Estate Property**

##### **4.8.1 Rate of Demand and Supply of Real Estate Properties**

Table 4.19 shows the summary of the study finding on the rate of demand and supply of real estate properties. Majority (57%) of the respondents indicated that the rate of demand and supply of real estate properties is average, 29% good while 14% opined the performance is poor.

**Table 4.19 Rate of Demand and Supply of Real Estate Properties**

	<b>Frequency</b>	<b>Percent</b>
Good	2	29
Average	4	57
Poor	1	14
<b>Total</b>	<b>7</b>	<b>100</b>

##### **4.8.2 Number of New Real Estate Units Sold for the Last 5 years per Year**

Table 4.20 shows the number of number of real estate units sold for the last 5 years per year. Majority (86%) pointed that they have sold 1-500 units, 14% indicated that they have sold 501-1000 units per year.

**Table 4.20 Number of New Real Estate Units Sold per Year for the Last 5 years**

	<b>Frequency</b>	<b>Percentage</b>
1-500	3	43
501-1,000	4	57
<b>Total</b>	<b>7</b>	<b>100</b>

##### **4.8.3 Main Targeted Customers**

The researcher also requested respondents to indicate the main target of the customer to sell the real estate property to. Most (43%) of the respondents indicated that they target employed individuals, 29% targets investors while 14% target companies and self employed as shown in each case.

**Table 4.21 Main Targeted Customers**

	<b>Frequency</b>	<b>Percentage</b>
Employed	3	43
Self-employed individuals	1	14
Companies	1	14
Investors	2	29
<b>Total</b>	<b>7</b>	<b>100</b>

#### **4.9 Inferential Statistic**

To measure the strength or correlation between independent variables and the dependent variable, this study conducted an analysis known as inferential which involves coefficient of determination, correlation coefficient, ANOVA and multiple regression.

##### **4.9.1 Karl Pearson's Coefficient of Correlation**

The study used the Karl Pearson's coefficient of correlation ( $r$ ) to compute the relationship between the variables under study. The findings show there is a positive correlation between demand and supply of real estate property all the Independent variables as follows: with price of real estate property, it was 0.507, with land availability the figure is 0.532, with economic situation the correlation figure is 0.624, and finally the correlation with demographic profile is 0.510.

**Table 4.22 Coefficient of Correlation**

		<b>Demand and Supply of Real Estate Property</b>	<b>Price</b>	<b>Land Availability</b>	<b>Economic Situation</b>	<b>Demographic Profile</b>
<b>Demand and Supply of Real Estate Property</b>	Pearson Correlation	1				
	Sig. (2-tailed)					
<b>Price</b>	Pearson Correlation	0.507	1			
	Sig. (2-tailed)	0.037				
<b>Land Availability</b>	Pearson Correlation	0.532	.320	1		
	Sig. (2-tailed)	0.086	0.019			
<b>Economic Situation</b>	Pearson Correlation	0.624	0.127	.276	1	
	Sig. (2-tailed)	0.037	0.364	0.046		
<b>Demographic Profile</b>	Pearson Correlation	0.510	0.185	0.111	0.250	1
	Sig. (2-tailed)	0.023	0.186	0.430	0.072	

#### **4.9.2 Model Summary**

In predicting future outcomes, we use the coefficient of determination,  $r^2$  and this measures how well our statistical model was used. To get the  $r^2$ , you square the sample correlation coefficient between the outcomes and predicted values. It therefore explains the in detail the contribution by each of the four independent variables in this research (price of a real estate property, land availability, economic situation and demographic profile) to the dependent variable. The  $r^2$  is equal to 54.5%. This means therefore that there are other factors that were not studied in this research which contribute to about 45.5% of demand and supply of real estate property. In summary, there is a dire need for further research to reveal the other factors that that contribute to demand and supply of real estate property.

**Table 4.23 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.738	0.545	0.214	0.160

### **4.9.3 Multiple Regression**

As per the SPSS generated table 4.24, the equation

( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$ ) becomes:

$$Y = 1.180 + 0.501X_1 + 0.512X_2 + 0.545X_3 + 0.504X_4$$

All the four factors have been taken into account in this regression equation. If you hold all the four factors at zero, demand and supply of real estate property will be 1.180. The findings presented also shows that taking all other independent variables at zero, a unit increase in price of a real estate property leads to a 0.501 increase in demand and supply of real estate property; a unit increase in land availability leads to a 0.512 increase in demand and supply of real estate property; a unit increase in economic situation will lead to a 0.545 increase in demand and supply of real estate property and a unit increase in demographic profile will lead to a 0.504 increase in demand and supply of real estate property. This simply means that from the research, economic situation contributes the most to demand and supply of real estate property followed by land availability, demographic profile and lastly price of a real estate property in that order. All the independent variables were significant because their P-values were less than 0.05.

**Table 4. 24 Regression Coefficients**

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	(Constant)	1.180	0.330		
Price	0.501	0.231	0.700	1.180	2.71 <sup>-02</sup>
Land availability	0.512	0.291	0.145	1.557	1.60 <sup>-02</sup>
Economic situation	0.545	0.132	0.110	1.324	1.24 <sup>-02</sup>
Demographic profile	0.504	0.268	0.351	1.023	8.21 <sup>-02</sup>

**CHAPTER FIVE**  
**SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND**  
**RECOMMENDATIONS**

**5.1 Introduction**

Chapter five summarizes the findings, conclusions and recommends ideas in line with the study objectives. Suggestions for further studies are also included in this chapter.

**5.2 Summary of the Findings**

On price of real estate property, the study found that majority (57%) of real estate property companies sell and manage both rental and commercial real estate. The study established that they sell their affordable properties between KShs. 4M to KShs. 6M while the monthly rent charged for an affordable property is KShs.25,000- KShs.50,000 per unit. Competition for limited key resources and abrupt increases in the cost of some building materials has led to high costs of housing. Likewise, buyers experience challenges when looking for land at a reasonable price and that neighboring property influence the pricing of housing in an area. Price volatility causes an option of holding undeveloped land because of fear of abrupt price changes. Increase in prices of land increase the availability of funds for mortgages by borrowers as people are willing to borrow against increase property values hence increase in demand to a great extent.

To the objective of land availability, the study found that availability of land influence supply and demand of real estate. The supply of land may be available, but getting land at an affordable price to allow for affordable housing is a big challenge and that high cost of land in areas profiled as prime lands hinders real estate developers to meet the demand of affordable housing.



On objective of assessing how the economic situation influences demand and supply of real estate property in Nairobi County, the study established that performance of real estate sector for the last five years in relation to the economic situation of the country has been good. Government red-tapes and price add-ons limit the demand and supply of real estate property. Development of more infrastructures has increased demand of property and that increased number of developers in the market does not automatically lower the price of residential and commercial real estate to a great extent.

To the objective of demographic profile, the study established that if there is increased demand for real estate property in an area, there is increased activity in the real estate sector and accelerated construction thus increased supply of property in that area and that clients considered housing due to appropriate pricing and comparison with other houses in the neighborhood. Transformation and growth of infrastructure in an area raises the value of a property and that clients considered residing in an area due to labour mobility.

### **5.3 Discussion of the findings**

The study sought to establish how price of real estate influences demand and supply of real estate property in Nairobi County, to determine how land availability influence demand and supply of real estate property in Nairobi County, to assess how economic situation influence demand and supply of real estate property in Nairobi County and to assess how demographic profile influences demand and supply of real estate property in Nairobi County.

### **5.3.1 Influence of Price of Real Estate on Demand and Supply of Real Estate Property**

On the objective of establishing how price of real estate property influences demand and supply of property in Nairobi County, the study established that a majority (57%) of real estate property companies deal in sales and management of both rental and commercial real estate. The study also established that they sell their affordable properties between KShs. 4M to KShs. 6M while the average monthly rent charged for an affordable property is KShs.25,000-KShs.50,000 per unit. This conforms to Edward (2010) who said that real estate prices are flexible unlike the prices of commodities at retail stores. Buyers shop knowing they can negotiate to lower the prices asked by the seller. Competition for limited key resources and abrupt surges in the cost of building materials has led to high costs of housing. Buyers too experience challenges when looking for a right place at a reasonable price and that neighboring properties influence the pricing of housing in an area. According to Sharpe (1999) a buyer's power of purchase goes together with ability to qualify for mortgages, ability to make payments, the cost of borrowing money and so on. These are major indicators of how high prices can go before being resisted by buyers as even the potential buyers are locked out. Price volatility causes an option of holding onto undeveloped land because of fear of adjustment costs. Increased in land prices improve credit availability for borrowers by financiers who avail more funds at cheaper rates to the market, hence boosting the demand for real estate assets and driving property prices even higher as there is motivation to take advantage of the available funds sets in.

### **5.3.2 Influence of Land Availability on Demand and Supply of Real Estate Property**

On the objective of how land availability influences demand and supply of real estate property in Nairobi County, this research found that availability of land influences supply and demand of real estate. Getting land at a fair price that allows or encourages affordable housing development is a big challenge and high cost of land in areas profiled as affluent prevents developers from meeting the demand of affordable housing in such areas (Satsangi *et al*, 2008). Banks of private developers like Erdemann have favored housing developments with faster rates of return over affordable housing, there is therefore an inadequate opportunity and shortage of adequate land at fairly lower price leads to increased demand for real estate to a great extent. According to Shucksmith *et al* (2008) the housing development system and the government policies available have not favored social housing but encouraged private housing market to thrive therefore having affordable housing is not easy. Fixed assets policies are yet to be fine-grained in policy terms to attract more investors to tap into this market.

### **5.3.3 Influence of Economic Situation on Demand and Supply of Real Estate Property**

On objective of assessing how the economic situation influences demand and supply of real estate property in Nairobi County, the study established that real estate markets are particularly complex because a number of economic and “extra-economic” factors go into the determination of economic outcomes (Hyman, 2009). Performance of real estate sector for the last five years in relation to the economic situation of the country has been good. According to Conner and Halle (2007) greater disposable incomes and new consumer attitudes as well as competition among the urbanized upper middle class have

encouraged a retail boom; and increased local and international trade or globalization which has led to increased demand for commercial spaces. Taxes such as stamp duty, mortgage facility fee, property insurance, higher utilities, regular maintenance and occasional upgrades of property limit the demand and supply of real estate property as they are seen as additional expenses. As a result of increased revenue to the government through taxes and working with development partners, the government now does more development of many infrastructure projects thus opening up areas leading to increased demand of real estate Liang (2009). Increase in real estate developers in the market does not automatically lower the price of housing and commercial real estate to a great extent.

#### **5.3.4 Influence of Demographic Profile on Demand and Supply of Real Estate Property**

To the objective of assessing how demographic profile influences demand and supply of real estate property in Nairobi County, the research established that increased demand for real estate property in an area, leads to more building activity and this is normally accelerated leading to increased supply of property in that area. The demographic profile in many of the developing countries is quite promising when forecasted (Edwards, 2007). Clients considered housing due to appropriate pricing and in comparison with other houses in the neighborhood. According to Edwards (2007) demographic change also greatly affects the price of property within a neighborhood, whether negative by decay or positive by growth. Transformation and growth of infrastructure in an area raises the value of property and that clients considered labour mobility to reside in an area. According to Torto (2008) the real estate firms begun responding to these opportunities in a variety of ways.

## 5.4 Conclusions

The study concluded the following based on the findings above:

- i. On how price of real estate influences demand and supply of real estate property in Nairobi County, most real estate property companies sell and manage both rental and commercial real estate. This study shows majority of those wishing to buy real estate property can only afford property that range between KShs. 4M to KShs. 6M for residential real estate while those who rent residential property are willing to pay monthly rent charged at between KShs.25,000- KShs.50,000 per unit per month. Competition for limited key resources and abrupt increases in the cost of building materials has led to high costs of housing. Likewise, buyers experience challenges when looking for a right place at a reasonable price and that neighboring property influence the pricing of housing in an area. Price volatility causes an option of holding vacant space due to fear of adjustment of prices and that increases in land prices, lowers the mortgage rates as more financiers are willing to avail more funds in the property market for borrowers, thereby increasing the demand for real estate assets which leads to higher property prices.
- ii. On the objective of determining how land availability influences demand and supply of real estate property in Nairobi, the study concludes that availability of land influence supply and demand of real estate. The study shows that in general land is available, however, getting land at an affordable price that can allow for development of affordable housing is the challenge. In addition, high land cost in areas profiled as prime lands hinders real estate developers to meet the demand of the housing. Banks

- of private developers like Erdemann have also favored housing developments with faster rates of returns over affordable housing.
- iii. To objective of assessing how economic situation influences demand and supply of real estate in Nairobi County, the study concludes that the performance of real estate sector for the last five years has been good. Taxes such as stamp duty, mortgage facility fee, property insurance, higher utilities, regular maintenance and occasional upgrades of property limit the demand and supply of real estate property as they are seen as additional expenses. Development of more infrastructure projects, such as highways, dams, bridges have increased demand of real estate and that increase in real estate developers in the market does not lower the price of housing and commercial real estate to a great extent.
  - iv. On assessment of how demographic profile influences demand and supply of real estate property in Nairobi, the study concludes that if there is increased demand for real estate property in an area, it leads to the building of more housing developments and accelerated growth in supply of property in that area. Clients considered housing due to appropriate pricing and comparison with other houses in the neighborhood. Transformation and growth of infrastructure in an area raises the value of a property and that clients considered labour mobility in residing in an area.

## **5.5 Recommendations**

The importance of securing property market is important to Kenya's economy especially in view of the Vision 2030 goals, which sets the real estate sector as one of the key pillars and an important resource for the development socio-economically of the Kenyan economy.

- i. Regarding how price influences demand and supply of real estate property in Nairobi, policy formulation for Land and Housing requirements should be fine-grained to differentiate social housing and private housing thereby allowing the government to regulate the real estate market. Regulations should be able to ensure that people do not buy residential houses for speculation purposes but for consumption purposes only.
- ii. On land availability and its influence on demand and supply of real estate property in Nairobi County continuous regulatory restrictions on land supply or the intensive use of land should be put in place. This is because if land use is not checked, it tends to pressurize property prices upwards as demand is expected to keep on increasing. This is further aggravated by the holding of vacant land also known as 'land banking'. Holding undeveloped land when land itself is scarce as one anticipates capital gains further hinders land supply and bids up prices of houses.
- iii. On the effect of economic situation and its influence on demand and supply of real estate property in Nairobi County, the government should put in place measures to check inflation of both rentals and purchase of property which takes time to respond market changes. The national government and county governments should offer

subsidies to private developers in the real estate sector in order to promote investment in this sector. These subsidies can be in form of financial subsidies, tax subsidies or supply of land for development of residential property. However, subsidies should not only target the low income housing but should include the middle and high income housing projects. This is because if the middle and higher income segments are left out, they increase competition in the lower income sector.

- iv. On assessment of how demographic profile influences demand and supply of real estate, major shifts in the demographics of a nation can have large impacts in the real estate market for decades. The National and County governments should have master plans and zone the city bearing in mind the needs for housing for its occupants. The county government should amend the available planning laws in order to allow construction of more buildings in the study area. This can be done by allowing construction of flats in the area and also allowing construction of high-rise residential buildings in order to meet the increased demand of residential property over limited supply of land. The county government should also allow subdivision of land into smaller pieces of land thus allowing more space for property development.

### **5.6 Suggestions for further studies**

The study has explored factors influencing demand and supply of real estate property in Nairobi County, Kenya with focus to Erdemann Property Limited. The real estate property in Kenya however is comprised of various established real estate property developers that manage their companies differently and target different markets. This necessitates the need for more studies that would generalize the findings of study for the



real estate property and open up ways that new policies will be made. This study thus recommends that a similar study on the other real estate companies in order to give the clear picture in the real estate sector on factors influencing demand and supply of real estate in Kenya. Further the study recommends that given that the factors discussed in this study contributes to 54.5% on factors influencing demand and supply of real estate in Kenya a study be done to establish the other factors (45.5%) that contribute on the same.

- i. On prices of real estate, further studies can be done on the effect of government intervention on regulating the real estate in terms of setting price ceilings on specific housing instead of the free market as it is now.
- ii. On land availability, it is noted that land cannot be moved from one area to alleviate the shortfall. Further studies on this objective would look at proper land management policies by the government and developers and restrictions on the type of buildings to be put up in a particular area, further studies can also be done on successful models of well-planned and zoned cities.
- iii. Further studies are also necessary on the effect of economic situation of the country towards real estate prices. Areas that can be further looked at is the management of inflation in the country.
- iv. Further studies on demographics are necessary as demographics describe the composition of a population with regard to income, migration, population growth and gender. Demographics is a wide topic and the studies can touch on each of the above mentioned points.

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## **APPENDICES**

### **Appendix I: Letter of Transmittal**

**Appendix II: Questionnaire for respondents - Erdemann management**  
**FACTORS INFLUENCING DEMAND AND SUPPLY OF REAL ESTATE**  
**PROPERTY: A CASE OF ERDEMANN PROPERTY LTD**

I am studying Master of Project Planning and Management program at University of Nairobi and I have designed the following questionnaire about the above topic. Kindly and humbly answer all the questions to the best of your knowledge. Indicate with a tick or filling in the space(s)

**SECTION A: GENERAL INFORMATION**

- 1) Kindly indicate the real estate you are managing .....
- 2) Kindly indicate your gender?
  - i. Male
  - ii. Female
- 3) Indicate the position that you hold in the organization?
  - i. Management staffs
  - ii. Residential premises manager
  - iii. Commercial premises manager
  - iv. Directors
  - v. Supervisors
- 4) How long have you worked with Erdemann?
  - i. 1- 5 years
  - ii. 6 – 10Years
  - iii. 10 – 15Years
  - iv. Above 16Years

- 5) What is your highest level of academic qualification?
- i. Post Graduate [ ]
  - ii. Graduate [ ]
  - iii. Diploma [ ]
  - iv. Certificate [ ]
  - v. Primary level [ ]
- 6) Is there agreement contract between sellers and buyers that covers concern of buyers for real estate transactions?
- i. Yes [ ]
  - ii. No [ ]
- 7) If Yes in No. 6. Do you think the agreement between sellers and the buyers meet customer expectations and protects the customer's interests?
- i. Yes [ ]
  - ii. No [ ]
- 8) Is there agreement contract between landlords and tenants that covers concern of tenants during use of the premises?
- i. Yes [ ]
  - ii. No [ ]
- 9) If Yes in No. 8. Do you think the agreements between tenants and the landlords meet customer expectations?
- i. Yes [ ]
  - ii. No [ ]

**SECTION B: Demand and Supply of Real Estate**

**PART I: Price and Demand and Supply of Real Estate Property**

10) What is the nature of real estate you sell or manage?

- i. Rental [ ]
- ii. Commercial [ ]
- iii. Both [ ]

11) If for sale, what is the average selling price of your properties?

- i. Less than KShs. 4M [ ]
- ii. Between KShs. 4M to KShs. 6M [ ]
- iii. Between KShs. 6M to KShs. 10M [ ]
- iv. Above KShs. 10M [ ]

12) If rental, how much is the monthly rental fees for the rental property per unit?

- i. Less than KShs.25,000 [ ]
- ii. KShs.25,000-KShs.50,000 [ ]
- iii. KShs.50,000-KShs.100,000 [ ]
- iv. Above KShs.100,000 [ ]

13) Kindly indicate the level of agreement with the following statements relating to the price and its influence to demand and supply of real estate. Use a scale of 1-5. Where 5-strongly agree, 4- agree, 3=neutral, 2- disagree and 1=strongly disagree.

	STATEMENTS	5	4	3	2	1
i.	Demand for real estate property is more likely to be affected by the business environment and economic confidence					
ii.	Price volatility causes an option value of holding vacant space due to fear of adjustment costs.					
iii.	Increases in land prices lower the external finance premium and improve credit availability for borrowers, hence boosting the demand for real estate assets and driving property prices					

	even higher					
iv.	Competition for limited key resources and sharp increases in the price of some building materials has led to high costs of housing					
v.	Technological change such as online marketing have reduced cost of operation hence boosting supply and help meets clientele demand					
vi.	When there is frenzy buying of property, prices are driven up forcing most sellers to off-load in the current market, resulting to high price of the market demand					
vii.	High demand by high class individual has resulted to high price of housing					
viii.	Increased demand by middle class clientele has resulted to property price increase					
ix.	Neighboring property influence the pricing of housing in an area					
x.	People experience challenges when looking for a right place at a reasonable price					

14) To what extent do you think price of housing influence demand and supply of real estate?

- i. To a very great extent [ ]
- ii. To a great extent [ ]
- iii. To a moderate extent [ ]
- iv. To a low extent [ ]
- v. To a very low extent [ ]

**PART II: Land Availability and Demand and Supply of Real Estate Property**

15) Does availability of land influence supply or demand of real estate?

i. Yes [ ]

ii. No [ ]

16) What is the approximate size of the land mostly sought in Nairobi County and its environs by property developers?.....acres/square feet

17) Do you find it difficult to access land for building?

i. Yes [ ]

ii. No [ ]

18) To what extent do you agree with the following statements relating to land availability and its influence to demand and supply of real estate properties? Use a scale of 1-5. Where: 5-strongly agree, 4- agree, 3=neutral, 2- disagree and 1=strongly disagree.

	<b>STATEMENTS</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
i.	Land supply in general may not be too problematic, obtaining land at a price that makes affordable housing development is a big challenge					
ii.	There is a lack of development opportunities and/or a lack of the means to realize opportunities					
iii.	Banks of private developers like Erdemann have favored housing developments with faster returns over affordable housing					
iv.	It is difficult to acquire adequate real estate through normal market mechanisms					
v.	Property developers are unable to developed adequate real estate due to lack of suitably priced lands					

vi.	High cost of land in areas profiled as prime lands hinders real estate developers to meet the demand of the housing					
vii.	Shortage of land at fairly lower price increases the demand for real estate					
viii.	Landowner interest in developing low cost housing is low as developers will not anticipate quick returns					

19) To what extent does availability of land influence demand and supply of real estate?

- i. To a very great extent [ ]
- ii. To a great extent [ ]
- iii. To a moderate extent [ ]
- iv. To a low extent [ ]
- v. To a very low extent [ ]

**PART III: Economic Situation and Demand and Supply of Real Estate Property**

20) Does economic situation of a country influence the demand and supply of real estate property?

- i. Yes [ ]
- ii. No [ ]

21) Has the economic situation within the country favored real estate sector?

- i. Yes [ ]
- ii. No [ ]

22) How would you rate the performance of real estate sector for the last five years in relation to the economic situation of the country?

- i. Good [ ]
- ii. Average [ ]
- iii. Poor [ ]

23) Indicate your level of agreement with the following aspects relating to economic situation of country and its influence to demand and supply of real estate properties?



Use a scale of 1-5. Where 5-strongly agree, 4- agree, 3=neutral, 2- disagree and 1=strongly disagree.

	<b>STATEMENTS</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
i.	High taxes by the government have reduced the purchasing power for real estate property					
ii.	Development in many infrastructure projects, such as highways, dams, bridges have increased demand of real estate					
iii.	Greater disposable incomes, at least in a certain segment of the urbanized upper middle-classes, and emergent consumerist attitudes have spurred a retail boom in real estate sector					
iv.	Internal and external trade have led to increased demand for warehousing space, as well as improvements in existing and construction of new modern houses					
v.	Property taxes, property insurance, mortgage fee and insurance, regular maintenance and sporadic upgrades, higher utilities limits the demand and supply of real estate property					
vi.	I consider any costs as part of the price when I am setting out to purchase or rent a piece of real estate					
vii.	Increase in real estate developers in the market lowers the price of housing and commercial real estates					

24) To what extent does economic situation of a country influence demand and supply of real estate?

- i. To a very great extent [ ]
- ii. To a great extent [ ]
- iii. To a moderate extent [ ]
- iv. To a low extent [ ]
- v. To a very low extent [ ]

**PART IV: Demographic Profile and Demand and Supply of Real Estate Property**

25) Indicate your level of agreement with the following aspects relating to demographic profile and its influence to demand and supply of real estate properties? Use a scale of 1-5. Where 5-strongly agree, 4-agree, 3-neutral, 2-disagree and 1-strongly disagree.

	<b>STATEMENTS</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
i.	When there is increased demand for real estate property in an area, it leads to the building of more housing developments and accelerated growth in supply of property in that area					
ii.	Transformation and growth of infrastructure in an area raises the value of a property					
iii.	The price of homes and rentals usually increases as people are willing to purchase at a higher price rather than risk no purchase at all					
iv.	Selection of a house is typically based on what appeals to personal tastes but also what is felt as the best value based on all of the houses seen by the client					
v.	Clients considered housing due to appropriately pricing and in comparison with other houses in the neighborhood					
vi.	Clients considered residing in an area due to labour mobility					

26) To what extent does demographic profile influence demand and supply of real estate?

- i. To a very great extent [ ]
- ii. To a great extent [ ]
- iii. To a moderate extent [ ]
- iv. To a low extent [ ]
- v. To a very low extent [ ]

**PART V: Demand and supply of real estate property**

27) How would you rate the demand and supply of real estate properties?

- i. Good [ ]
- ii. Average [ ]
- iii. Poor [ ]

28) For the last five years, how many new real estate units have you managed to sell per year?

- i. 1-500 [ ]
- ii. 501-1,000 [ ]
- iii. Over 1,000 [ ]

29) Who are your main targeted customers?

- i. Employed individuals [ ]
- ii. Self-employed individuals [ ]
- iii. Companies [ ]
- iv. Investors [ ]

30) How what would you recommend to be done to enhance demand and supply of real estate properties in the country?

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**THANK YOU FOR YOUR PARTICIPATION**