

Valuation of Up-market Residential Properties  
in Nairobi-Kenya

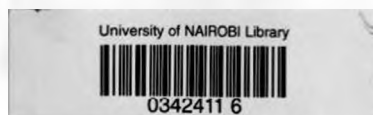
By

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A dissertation submitted in partial fulfilment for the requirement of the degree of Master of Arts in Valuation and Property Management in the Department of Land Development Faculty of Architecture Design and Development University of Nairobi, Kenya

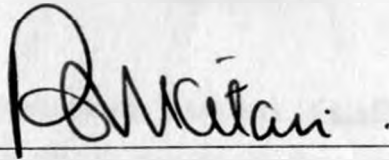
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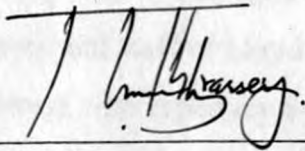
## DECLARATION

I, BERNADETTE MUTHIRA GITARI, do hereby declare that this dissertation is my original work and has not been presented for a degree in any other university.

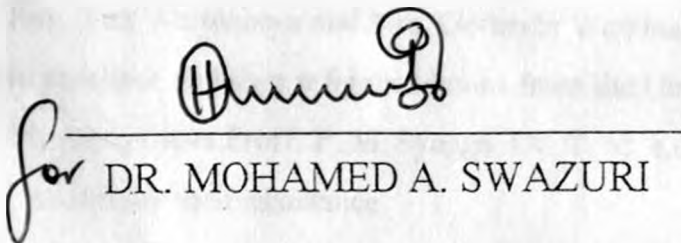


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This dissertation has been submitted for examination with our approval as supervisors



DR. TOM M. KONYIMBIH



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## DEDICATION

“This work is dedicated to my parents, Mr. Paul Gitari Kamau (deceased) and Mrs. Mary Njeri Gitari for their support and encouragement especially during my youth. As St. Paul says in his letter to the Romans, “We know that by turning everything to their good, God Co-operates with all those who love Him, with all those that are called to his purpose”. Romans 8:28.

(African Bible, 1999)

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## ABSTRACT

Housing occupies an important position in the Kenyan psyche along with the concept of home ownership. The residential developments and investments attract both institutional, corporate organisations as well as private individuals. There are indications that the residential market in Nairobi is very active and that most of the valuation firms in Nairobi carry out market-based valuation of residential properties.

This study is about the valuation of up-market residential properties in Nairobi and in particular the factors that are considered in the valuation of residential properties, the methods adopted and the source and methods of analysis of sales data. The study attempted to determine the causes of variations or differences in market values of residential properties in a similar location.

This study was carried out in Lavington and Riverside Estates which are up-market residential estates of Nairobi. Land values vary from KShs.8.0 million to KShs.15.0 million per acre. The built residential properties, whose built up areas vary from 1500 square feet to 5000 square feet, sell at between KShs.8.0 million and KShs.35 million. Market rents of the built residential properties also range from KShs.45,000/- p.m. to KShs.200,000/- per month. The sizes of accommodation offered vary from standard three-bedrooms-one-bathroom house to five or six bedrooms with four or five bathrooms. These estates extend from Kileleshwa to Kawangware and Kangemi, which are low-income residential properties. Subsequently, variability or differences in market values of residential properties is huge and

therefore provided data that was required in the research. Other estates considered in the research included Kilimani, Westlands, Karen and Runda mainly to supplement data used in the study.

The research was investigative and was conducted using information mainly obtained from the Institution of Surveyors of Kenya, Secretariat in Nairobi. All diploma examination papers were perused in order to obtain data. In addition, registered valuers practising in Nairobi were interviewed in order to ascertain the methods they used in the valuation of residential properties.

The study found out that the significant factors that determine the value of a residential property in the same location are size of plot and market rent. Market rent is in turn determined by size of main house, location and accommodation in terms of bathrooms, bedrooms and reception areas.

Therefore the most appropriate method of valuation of built residential properties is the Income Approach or the Investment Method.

The most preferred method of valuation adopted in the valuation of up-market residential properties in Nairobi is the Cost Approach. However, comparable sales are adopted to justify the final opinion of value. The valuer also relies on one method of analysis which is cost related.

Computer based methods of analysis are not used by valuers in Nairobi. Market rent which is a significant variable in comparing sales data of residential properties is also not considered.

Subsequently, variations in market values of up market residential properties will arise due to the application of the various valuation approaches, availability and subsequent analysis of comparable sales data.

The research recommends that since comparable sales are central to the valuation process, a central data bank of comparable sales should be established and made accessible to valuers and researchers. The sales data obtained from the data bank should be subjected to vigorous analysis such as regression analysis to determine the significant contribution of the units of comparison to market values of residential properties. Valuers should therefore, be trained in the application of these statistical methods through Continuous Professional Development.

The Institution of Surveyors of Kenya should also come up with valuation guidelines and standards on valuation of all categories of properties. This would form a basis for further research in areas of international professional standards and valuation guidelines, which would be suitable for valuers operating in Nairobi.

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## CHAPTER ONE

### Introduction and Problem Statement

#### 1:1 INTRODUCTION

Valuation, assessment, and appraising have all come to have the same meaning in the real property field. Agreement is almost universal that the terms are interchangeable (Khan, Case and Schummel, 1963). It is defined as an art or science of estimating the value of a particular interest in property, for a specific purpose, at a particular time, taking into account all features of the property and also considering all other market factors (Britton, et-el, 1980).

Valuations are carried out for various purposes. Various authors have summarised the categories of valuations in terms of:

- a) Location based valuations which are either rural or urban.
- b) Institutional based valuations such as schools and hospitals, Syagga, (1994).
- c) Value returned based valuations which are market value for sale and rental purposes, going concern valuations, mortgage or bank valuations and replacement cost or value based, Kingoriah (1980).
- d) Statutory valuations which are valuations carried out under an Act of Parliament. Such valuations include Compulsory Purchase valuations, Rating Valuations and assessments for the Rent Restriction Tribunal among others, Syagga (1994) and Kingoriah (1980).

The interest in real estate is also referred to as a bundle of rights. These rights may be communally owned or individually owned. In Kenya most of urban Land is owned individually either privately or publicly.

Residential real estate markets, though imperfect in nature, operate under the economic rules of supply and demand. There are many players both on the demand and the supply side, who include individuals and institutions, either, private and public, and who play a role in the residential real estate market. It follows that social, economic and political factors influence the residential real estate market.

In Kenya, Registered Valuer is defined under sec.21 of the Valuers Act Cap 532 of the Laws of Kenya (Kenya, 1984). The role of the valuer is to estimate the value of real estate. In arriving at a valuation the valuer considers all factors that affect the residential real estate, takes into account the principles of valuation, and adopts the appropriate method to arrive at a value judgement.

When valuers talk of value, they are referring to market value which is the price paid for real estate between a willing seller and a willing buyer.

The market values of residential real estate vary either with location, type of residential property, the design, construction and accommodation, and physical and environmental factors. It follows that no two properties would have the same value irrespective of their location and property characteristics. There are also no two valuers who would arrive at the same valuation even when they use the same data and method of valuation.



Work has been carried out on acceptable margins of error in a valuation assignment. These works include Kiptoo, (1999) who considers a reasonable range for returned valuations as 20% both sides, and Konyimbi (1997) who recommended a range of 15% both sides. Syagga, (1999) says statistically a good estimate should be accepted within 10% confidence limit or lower. So in the event that the variance is above these accepted limits then there would be a problem either in the data, the method of analysis or the basis of the valuation. The obvious checklist by the valuer is the data on the property as well as the market data used in the valuation process.

There has been in recent years an increasing interest shown in the use of statistical analysis, the construction of models, the elaboration of formulae and the writing of programmes to enable computers to process data. The reason for this is to make it more readily usable, that information about market price availability, the weight of factors, future trends and so on. Multiple regression analysis is one of these techniques that use computer packages to estimate value of residential properties as well as measure quantitatively the effects of various factors that affect the value of residential properties. Rimberere measured the effect of location on residential properties as 62% of the total value. Swazuri, (1996) used the method to value waterfront properties. These techniques have been projected to provide nearly 95% accuracy levels Gyhoot, (1999).

In Kenya majority of the residential properties continue to be developed by the private sectors as opposed to the Government. The Government policy

regarding the role of the private sector in housing development is contained in the 1974 to 1978 Development plan Section 21:43 and states that the Government intention is

- a) to inject capital through parastatal bodies like Housing Finance Company ,Commercial Banks and Insurance Companies for housing development
- b) Encouraging housing development by overseas investors
- c) encouraging the provision of staff housing by industrial and commercial enterprises

Residential developments in many parts of the country have, therefore, been left to the private sector (Kingoriah, 1980)

It is estimated that approximately 75% of Nairobi consists of built residential land including amenities. In most cities over 35% of all urban land is residential land (Kingoriah, 1980). It is, therefore, estimated that majority of valuations carried out by the private valuers in Nairobi are on residential properties. A field survey carried out by the author indicated that approximately 65% of all valuations carried out in Nairobi are on residential properties in all income brackets i.e. low, middle and high-income neighbourhoods. The purpose of the valuations is mainly open market value for bank or mortgage purposes. Ngugi, (1988) states that “before a loan is given or a sale of a property by auction is carried out the real property given out as security for the repayment of the loan is normally valued”. Mackmin (1994) also states that “every time a bungalow, flat or other unit of residential accommodation is bought or sold, someone will have prepared a valuation, even if it is only a personal opinion”.

Valuers work under less than ideal conditions particularly because of time pressures and/or availability of data required or desired to complete their analysis. Yet the best possible judgement must be reached about how much, in any currency, the property interest being valued is worth under the market conditions. That is why different alternative techniques for approaching a professionally accepted and reliable valuation conclusion have arisen.

This study is an attempt to investigate the causes of variances or differences in the market value of residential properties in Nairobi. This was achieved by outlining the factors that are considered in the valuation of residential properties, investigating the methods of valuation adopted in the valuation, and highlighting areas in the method that bring about variations in market value of residential properties. Recommendations were given on how these variations may be reduced within the framework of the valuation process.

## 1.2. THE PROBLEM STATEMENT.

In the valuation process, valuers start with a given property and try to determine a value figure that reflects the current attitude of typically informed users and investors as to the probable future utility of that property. The determination of these value figures is usually accomplished through a valuation process. This valuation process is a praxeology i.e. a method of deductive reasoning that starts from first principles of a priori logic and builds analytical means (valuation methods) without which any conclusions are invalid (Syagga, 1999).

The valuation of real property involves three major activities:

1. Collection of pertinent data.
2. Inspection of the subject property, its information on its characteristics, comparable sales, the area and neighbourhood.
3. Organization and analysis of the data to arrive at a value opinion for the subject property.

The data that is required in the valuation process depends on the property being valued and the purposes of the valuation.

Wurtz bach, (1995) identifies property data in a valuation process as property and non-property characteristics. The property or site characteristics of value include location, size of land, size of building, type and quality of construction, and the terrain of the site, the design, the age and condition of the improvements as well as the interior configuration.

Non property or non-site characteristics relate to verified sales prices and market data of sales within the neighborhood, financial terms and conditions of sale.

The two principal factors that influence the value of residential properties are location and accommodation. The general level of prices in a neighbourhood is determined by location characteristics while the differences in value between individual properties is determined by the nature and extent of the accommodation they offer Lawrence, Rees and Britton, (1971).

Ordinarily therefore, if a valuer carries out a valuation exercise using the principles of valuation and the relevant methodology he should be able to arrive at a figure of value. Differences in values of similar properties are quite common in valuation practice. However such differences are expected to be small and reasonable, simply because there are different perceptions of value by different valuers.

Preliminary surveys carried out by the author in residential locations in Nairobi indicate that there are variations or differences in the market values or prices paid for residential properties in the same locations or neighbourhoods. These differences exceed the acceptable variation levels of between 15% and 20% as measured by Konyimbi (1997) and Kiptoo (1999) respectively. The examples of two locations are shown below.

### 1.2.1 Table 1

Example of Variations in market value of residential properties in Lavington Estate.

L.R. Number	Area Acres	Title	Area Main House	Market value (Kshs.)	Year
3734/aaa	0.83	Freehold	4388	18,500,000	1996
3734/bbb	0.957	Freehold	4000	23,000,000	1998
3734/ccc	0.99	Freehold	1633	9,000,000	1997
3734/ddd	0.784	Freehold	1222	12,500,000	1996
3734/eee	1.022	Freehold	2543	16,000,000	1997

Source: Field data by author.

Assuming all the properties are undeveloped and the unit of analysis is price or market value per acre, the range of prices for land in Lavington would be Kshs.9.0million and Kshs.24.0million within the same location over a period of 3 years. This is a variation or difference of 166% in values in one location. Assuming the properties are developed and the areas of the main houses are as shown and the unit of analysis is square feet. The analysis would range between KShs.4216 per square foot and KShs.10229 per square foot of built up area, a variation of 242%. What would be the unit of analysis adopted by the valuer and how would one account for such huge variations in one location?

### 1.2.2 Table 2

#### Variations in market value of residential properties in Karen Estate

L.R. Number	Area Acres	Title	Market Value (Kshs.)	Year
194/aa	4.8	Freehold	13,000,000	1998
1055/bbb	9.45	Freehold	20,000,000	1998
1160/ccc	5.45	Freehold	18,500,000	1998
1160/ddd	10.0	Freehold	25,000,000	1997
1159/eee	10.0	Freehold	26,000,000	1999
1160/fff	6.0	Freehold	32,500,000	1997

Source: Field Data by Author.

Given that these properties are found in the same locality, it shows that the market value of residential properties in Karen is between Kshs 2.0million and Kshs 4.0million per acre. This is a difference of 170% between the highest and the lowest market price paid for properties in the same location. What brings about these wide or huge variations?

In 1997, Nairobi based firm of valuers was accused by a local commercial bank of returning two different valuation of the same property. The difference was between Kshs 46.0 million and Kshs.280.0 million, a difference of 600% within a period of six days. The firm provided a statement to justify the two figures(Daily Nation, 19<sup>th</sup> March 1997). Although these may be sighted as one-off cases. they illustrate the confusion that sometimes buyers, sellers and even investors find themselves.

in when making a decision on investing in a residential property. Other valuers who rely on historical data to determine the present value or future worth or utility of similar properties would also be confused. In the event an independent valuer is called upon to arbitrate in this situation what would he look for as the main causes of the differences bearing in mind the valuation process and the requirements of valuation data analysis as outlined in the introduction?

Coupled with all these, is that The Institution of Surveyors of Kenya has not yet come up with proper guidance notes on the valuation process especially on the sources of market data and methods to be adopted in the valuation of residential properties. So each valuer or valuation firm adopts their own guidance notes and procedures that suit the particular instructions and the data that is available.

The recently published Valuers and Estate Managers Hand Book (2000) has addressed issues of registration, the constitution etc. but has not provided guidelines on the valuation process.

The main concern of this project is the variations or differences in market values of residential properties situated in the same location or areas, having similar characteristics and where similar methods of valuations are applied in the valuation process. What could be the main causes of such differences?



### 1.3. STUDY OBJECTIVES.

1. Outline the factors that are considered in the valuation of residential Properties in a similar location.
2. Determine the methods used in the valuation of residential properties.
3. Identify possible causes of variations or differences in the market value of residential properties.
4. Recommend or suggest improvements in the methods of valuation of residential properties and which would minimize variations in the market values of residential properties.

### 1.4. HYPOTHESIS

Unavailability of comparable sales data, limited analysis and subsequent interpretation of sales data is responsible for variations in market value of up-market residential properties

### 1.5 RESEARCH METHODOLOGY

This research was carried out using both primary and secondary data.

#### 1.5.1. Secondary Data

Secondary data was acquired through literature review of related literature from books, journals and publications from various libraries. Several Websites of valuation institutions were served to obtain any relevant articles on valuations and in particular the valuation process. Websites of

renowned real estate institutions such as The Appraisal Institute of United States of America, Appraisal Institute of Canada, and Royal Institution of Chartered Surveyors (UK) were perused with the intention of obtaining information relating to the valuation process. Journals of real estate valuations such as the Appraisal Journal, The Chartered Surveyor Monthly (UK) and The Valuer (South Africa) were perused to find out what publications or articles that have been published on the valuation process and in particular valuation of residential properties. Works that have been carried out on measurement of variability or differences in market values were reviewed and, in particular work carried out on multiple regression analysis and its ability to measure variations in the identified variables were reviewed. Such works include those of Rimber (1986), Swazuri (1996) and Gyhoot (1999) all of which tried to measure the effect of variables identified and were able to achieve 95% confidence levels in their models.

### 1.5.2. Primary Data

Primary data was collected from the field and used in data analysis. The data included property as well as non-property data such as sales data, market trends and any other data that is relevant in the valuation of residential properties. The research concentrated on built residential properties in selected high-income neighborhoods. These neighborhoods included Lavington, Kilimani and Riverside Estates, which have similar characteristics. These estates were chosen so that adequate data would be available for use in the analysis. These estates have single dwelling houses on plots of between 0.5 and 1.0 acres.

Residential properties have varied characteristics, especially those that relate to accommodation and quality of the finishes which are the determinants of differences in values especially in one location. Lawrence Rees and Britton, (1971). In these residential estates, residential properties change hands often and evidence on market values as well as market rents are available.

This project is an investigative research. An investigative research looks at the subject to discover facts or information. Therefore, an examination of the process of valuation with reference to data analysis and interpretation was carried out. A survey was carried out to determine the methods adopted in the valuation of residential properties as well as the analytical techniques adopted and how they relate to other techniques which have been used in other countries or which have been reviewed in the literature review. Since these techniques have been found to measure the extent of variations and the weight or contribution of the various factors that affect the value of residential properties, they were compared with what is actually adopted by the valuers in order to determine areas that cause variations in market values as well as the extent of the differences.

#### 1.6. RESEARCH PROCEDURE

This followed the following steps:

1. Outline the factors that are considered in the valuation of residential properties and which may lead to variability or differences in market values.

2. Determine the methods of valuation used or adopted in the valuation of residential properties.
3. Data collection.
4. Analysis of data.

#### 1.6.1. Outline the factors that are considered in the valuation of residential properties.

Every valuation is a research project because the valuer must identify and gather systematically the data required in the analysis. This data must not only be reliable but current as well, Appraisal Institute, (2001)

In Kenya, there are no documented Standards of carrying out a valuation. This is in contrast with the United States of America, where Appraisal Standards Board of the Appraisal Foundation states:

“----- For the purposes of developing an appraisal, the appraiser must adequately identify the real estate, consider the purpose and intended use of the appraisal, consider the extent of the data collection process, identify any special limiting condition and identify the effective date of the appraisal. The extent and depth of the inspection process varies with the type of property appraised and the conditions of the appraisal.” It is the appraiser’s responsibility to determine if adequate information is available, about the subject real state to develop a real property appraisal – (Office of Real Property Services 2001).

The Royal Institution of Chartered Surveyors (UK) has guidance notes on the valuation of residential property and this covers the property, nature of interest, planning and statutory regulations. For the purposes of this study,

The Royal Institution of Chartered Surveyors (UK) guidelines were be adopted as quoted by Mackmin, (1994).

The data that is required for valuation of residential properties is summarised as follows:

Data on the property. These include:

1. Characteristics of the property

- location
- Area
- Site and siting qualities
- Design and accommodation
- Construction and condition e.g. roofs, floors walls and internal finishes & fittings
- Title details
- services: water, electricity sewage system, telephone, roads, planning regulations

2. Sales Data available for use in the valuation

3. Market Data on residential properties.

- Market values
- Trends in values

4. Any other data necessary in the valuation of residential properties.

1.6.2. Determine the methods adopted in the valuation of residential properties in high income neighborhoods

Syagga. (1999) states “despite major changes in attitudes and perception. the property ownership and development. the valuation methods have

essentially remained the same throughout the century”. Swazuri, (1996) says that these methods of valuation have been developed from “the early theories of value” and they include:

- Replacement Cost Approach
- Income Capitalization approach
- Comparative Approach also known as the sales comparison approach.

The decision about which approach to adopt depends on the kind of data that is available to the valuer. Kiptoo, (1999) states “that adequate data would lead to simulation of most probable price while inadequate data would lead to adoption of the normative value definition”.

The methods adopted by valuers on high income residential properties were obtained both from the examination papers submitted, for the Institution of Surveyors of Kenya Diploma Examination, as well as from interviews with Registered valuers practicing in Nairobi and who handle valuations of residential properties.

In determining the methods of valuation, efforts were made to obtain the methods of analyzing the data, the sources of comparable data and the way the final opinion of value is arrived at.

According to the Institution of Surveyors of Kenya Valuation and Estate Management Chapter, there are 316 full members, approximately 200 members are Registered and Practicing Valuers under the Valuers Act Cap 532. Out of all the 200 members, approximately 150 members practice in Nairobi either as individuals or in partnerships. A total of 30 valuers

mainly in the private sector and who are practicing in relatively large firms of valuers and estate agents were interviewed.

### 1.6.3. Data Collection

This relates to the data on the factors that affect the value of residential properties. These were obtained from sample valuation reports obtained from The Institution of Surveyors of Kenya Valuation and Estate Managers Chapter. All the examination papers submitted by candidates sitting for the professional examination between the years 1995 to 2000 were inspected in order to obtain the details contained in the valuation reports and which the valuer relies on in the process of valuation. The data obtained referred to properties whose market value is in excess of KShs.5.0 million.

Sales data of residential properties was obtained from 10 leading valuers and estate agents in Nairobi especially those who have an estate agency department. These companies included Lloyd Masika, Tysons Limited, Gimco Limited, Mwaka Musau Valuers and Estate Agents, Bageine Karanja Mbuu Valuers and Estate Agents, Kenya Valuers Limited, Knight Frank Limited, Ngotho Wathome Limited, MetroCosmo Valuers and Realtors Limited. A total of 30 sales recorded in Lavington, Kilimani and Riverside Drive between 1995 and 2000 were obtained. The data included market value and all property characteristics such as title, area of land and all the improvements, accommodation details and the date of sale. The data was limited to a minimum price of Kshs 5.0 million. The accuracy of the

sales data was counter checked with official searches at the Land Office. The data from the estate agents was found authentic as shown below.

### 1.6.3 Table 3

Variations between market value from valuers and estate agents and the registered sales at the Land Office

L.R. Number	Market Price	Registered Sale	Variance
	(KShs.) Estate Agents	(KShs.) Land Office	
3734/aaa	18.5 million	10.0 million	(46%)
3734/bbb	22.0 million	8.4 million	(68%)
3734/ccc	17.5 million	12.5 million	(28%)

Source: Field Data by Author.

Therefore data from the valuers and estate agents was adopted in the research.

The trends in property values were obtained from Property Reports prepared by leading valuers and estate agents companies such as Knight Frank Limited as well as financial reports on the performance of the various sectors of the economy by leading financial institutions such as Barclays Bank and Standard Chartered Bank.

### 1.6.4. Analysis of data

The data collected for this purpose was coded and systematically analysed using both descriptive and inferential statistics. The frequencies of occurrence were obtained and the data ranked in order of preferences. A



regression analysis was carried out to determine the significant units of comparison of sales data. The findings were presented in an explanatory format with certain results being explained in tables. Computer packages such as Microsoft Word and Excel were used for descriptive analysis.

Tables and charts to illustrate the data were used. The unit of analysis was the market value.

In the second stage of analysis, a regression analysis was carried out to determine the significant factors or units of comparison of sales data and their contribution to market value of residential properties. The purpose of this simple regression was twofold (a) to establish the degree and strength of association between the dependent variable market value and the independent variables such as size and accommodation. (b) to give a general indication of how much of changes in market value of residential properties is explained by each independent variable.

The regression equation took the form of  $Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + \dots$  where Y is taken as the dependent variable, "a" is the intercept,  $b_1 - b_n$  is the partial correlation co-efficient and  $x_1 - x_n$  is the independent variable. The intercept "a" represents the market value of residential properties when all the independent variables ( $x_1 - x_n$ ) are zero. Each partial correlation co-efficient on the other hand gives an indication of the changes in Y (dependent variable) for every Unit change in x (independent variable) with all the other variables being held constant.

### 1.7.SCOPE

The study covered residential properties whose market value is above Kshs 5.0million. The areas covered include all estate in Nairobi Planning Zone Number 4 and 5. These residential estates include Kilimani, Lavington, Riverside Drive and Westlands Estate. The study covered single dwelling houses and not flats or town houses. The minimum plot size would be 0.5 of an acre.

However due to the limitation on availability of data, examples have been obtained from other residential estates with similar characteristics. Such as Karen and Runda Estates.

### 1.8.THE STUDY AREA

Residential is defined as “designed for people to live in, providing accommodation in addition to other services” Pearsall, (1998). A residential property would therefore refer to a vacant or improved parcel of land devoted to or available for use as an abode (Appraisal Institute, 2000).

Abode means a place of residence, a house or home.

Residential properties would therefore refer to plots reserved for residential development, or developed properties that are used for residence or a place to live.

Mackmin, (1994) says, “every time a unit of residential accommodation is bought or sold, someone will have prepared a valuation”. In this reference, three categories of developed residential properties are identified i.e: flats houses and bungalows. However, the categories of residential properties generally include:

1. Vacant plots reserved under planning regulations for residential development.
2. Bungalows or houses on individual plots as found in Muthaiga, Karen and elsewhere.
3. Flats or apartments, which are residential, structure containing a number of units each with a separate outside entrance.
4. Town houses or terraced units which are single family, attached dwelling units with party walls usually on individual unit in a series of five to ten houses with common walls between them and side yards on the end unit only may have one or three stores and all necessary amenities and facilities.
5. Tenement blocks or houses, which are multi-storey dwellings that consist of occupancy units that do not have private baths and or private kitchens.

The study covered category (2) of residential properties in Kilimani, Lavington, Riverside Drive and Westlands Estates. Maps showing the location of these estates are shown on pages 25, 26 of this dissertation. Riverside Drive Estates.

These estates fall under Nairobi City Council zone number 4 and 5. (1979 Nairobi Town Planning Regulations). The Planning requirements are as follows:

- a) Minimum plot sizes of 0.25 of an acre on sewer or 0.5 of an acre off the sewer
- b) Flats and town houses are allowed.
- c) The plot ratio is 0.75 and the site coverage is 0.35.

In addition to the above, the estates have similar characteristics such as:

- a) The roads are built to adoptive standards, which include tarsurfaced, street lighting kerbs and storm water drainage.
- b) The properties are privately owned by individuals or companies, owner occupied or let on annual tenancies and therefore valuations are carried out on the basis of vacant possession.
- c) The variability in market values in these locations are significant as shown in the examples earlier. The sales are handled by estate agents because of the quantum of prices paid and the marketing that has to be done before a sale is concluded. The properties would also have been valued for sale or for other purposes and therefore more details on the properties are available from the valuers or valuation reports and therefore would be reliable. The sales data collected was for the period 1995-2000.

### 1.9.SIGNIFICANCE OF THE STUDY

This study is an investigation of the process of valuation and in particular the methods and analytical techniques which are available to a valuer carrying out a valuation of residential properties in Nairobi.

The study will assist valuers in understanding the complexity of residential real estate, market its players and factors, both subjective and objective, that affect the value of residential properties.

The study introduces the concept of computer aided valuation techniques which have been adopted in South Africa and United States of America.

### 1.10.Organization of the study

The study is divided into four chapters. Chapter One outlines the introduction and the problem statement. The objectives of the research are also stated as well as the methods to be used to achieve the objective of the study, the hypothesis, methodology and the scope of the project.

Chapter Two deals with the literature review on value factors that affect value of residential property, determination of value, the methods of valuation, methods of analysis of market data and the concept of market value.

Chapter three is an analysis of research data in particular the factors that affect the valuation of residential properties, the methods of valuations adopted in the valuation of residential properties, the methods of analysis of market data etc.

The final chapter of this work is the conclusion and recommendation chapter. It discusses the main findings of the research, gives recommendation and suggests areas that need further research.

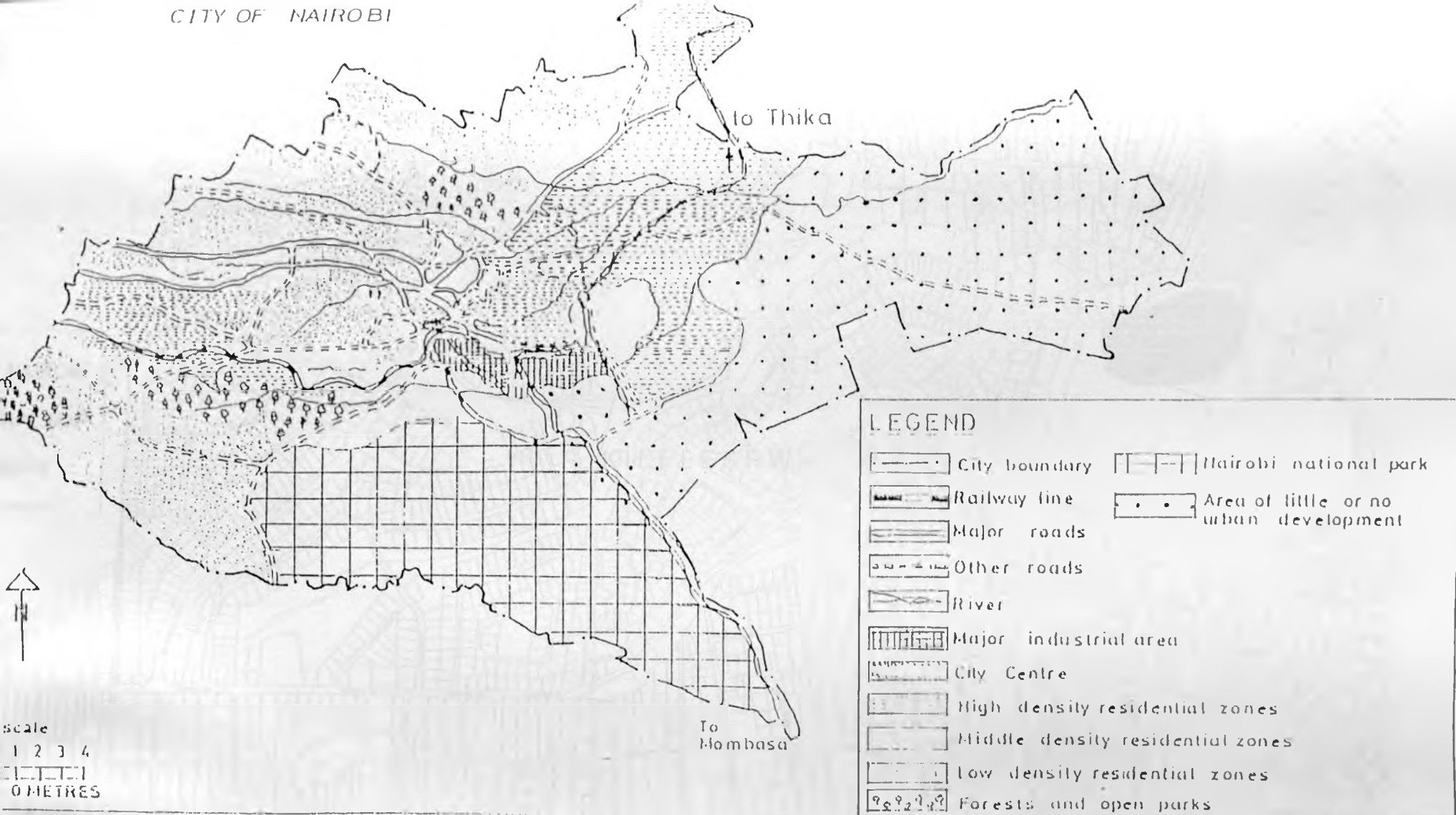


FIGURE 1.2 RESIDENTIAL ZONES

Source Dept of Urban and Regional Planning, UOR



CENTRAL MAP  
MAPS  
Survey of Kenya

WESTLANDS

LAVINGTON

KILELESHWA

KILIMANI





A STREET MAP OF NAIROBI  
LSI MAPS

## CHAPTER TWO

### Literature Review

#### 2.1 INTRODUCTION

Chapter One introduced the problem of differences or variations of market values of residential properties in Nairobi. This chapter deals with the literature against which a valuer carries out a valuation of a residential property. The chapter introduces the concept of real estate, its characteristics, the valuation process, the methods used in the valuation of residential properties and the analytical techniques available to the valuer carrying out a valuation of residential property.

#### 2.2 REAL ESTATE ECONOMICS

The terms real estate, real property and personal property is widely used but not often clearly defined. Real estate refers to land and the appurtenances affixed to the land i.e-permanent improvements and attachments such as buildings and fences. Real property refers to the interest, benefits and rights inherent in the ownership of a physical real estate. A right or interest in real estate is also referred to as an estate or a bundle of rights. An estate in land is the degree, nature or extent of the interest held. Personal property refers to identifiable portable and tangible objects that are considered to be personal and are not permanently affixed to real estate (Appraisal Institute, 2000).

In Kenya, the closest definition of real estate or property is found in the definition of land as contained in the Land Acquisition Act Cap 295 of the Laws of Kenya as “All Land whether covered with water or not and things attached to the land or permanently fastened to anything attached to land (where the meaning may be inferred) any estate, term easement rights or interest”(Government of Kenya). Real Estate in Kenya includes “the soil plus everything below it to the centre of gravity and everything above it to the sky and anything that which is permanently fixed to the soil (Syagga, 1994). The valuer must determine the ownership, possession and control of property to define the valuation problem. The specific rights to be valued must be identified at the onset of a valuation problem.

Interests or rights to be valued are categorised in Kenya as:

- (a) Estates which include freehold and leasehold interest.
- (b) Encumbrances, which are burdens on the title of a holder in land but in favour of some, people who initially did not hold any interest in the given piece of land.
- (c) Servitude which include easements, profits and restrictive covenants.

Real estate is categorised in Kenya in three categories:

- (a) Rural property to include farmland, forestry and mineral land.
- (b) Urban property which include commercial, industrial and residential.
- (c) Special purpose properties which include petrol stations, hotels and restaurants, recreation facilities, halls and places of assembly and institutional properties (Syagga, 1994).

Residential real estate falls under the category of urban properties. The valuer of a residential property must understand the property being valued and distinguish it from personal property that may be involved in the proposed valuation, understand what items are to be included in the valuation.

### 2.2.1. Characteristics of Real Estate/Property

Real estate or property has distinct characteristics as a market commodity. The distinction among the classes is sometimes uncertain. Wurtzebach, Miles, and Cannon, (1995) have classified real estate characteristics as physical and economic. Dasso and King, (1989) add a third characteristic which is institutional. Therefore the characteristics of real estate are as shown in the chart below:

<u>Physical</u>	<u>Economic</u>	<u>Institutional</u>
Immobility	Situs	Real property law
Fixity	Scarcity	Public Regulation
Indestructibility	Interdependency	Local and Regional Customs
Heterogeneity	Durability and fixity of investments	Associations and organisations

The physical features include immobility, that is real estate is fixed in a location and cannot be moved. Therefore it is at the mercy of the environment. Since land is immobile it follows that each single parcel of

real estate has a location that cannot be duplicated. Every parcel of real estate, being unique, is therefore heterogeneous or of one kind. Finally real estate is indestructible both as a physical asset as well as an object of legal interest.

The economic features of real estate are generally parallel to the physical features. Economic attributes may be the result of physical or institutional characteristic. These include location relative to other external land use; activities also referred to sites. Related to the choice of location is accessibility. Another economic attribute includes scarcity. Land is said to be fixed in supply for all practical purposes, and because every location is unique, only certain parcels can satisfy the requirements of a particular use or investment. Durability of investment or long economic life of real estate is another economic attribute and finally situs or interdependence or modification. This concept focuses on the impact of development on the total value of a parcel reflecting the fact that existing or potential future development can have a significant impact on value. Thus, the use and value of a given property is subject to modification by decisions and changes made about by other properties. In net the value relationship between properties tends to synergies both positively and negatively.

An institution is an accepted and established part of society as an organisation, a believe, law or custom. Institutions shape the way we think and act and in turn may exert a profound influence on values. Such institutions include property laws, public regulations, local and regional customs and other associations or organisations.

### 2.2.2. Demand and Supply Factors in Real Estate

Despite the imperfect nature of real estate, demand and supply factors are still important factors influencing the value of real estate. Syagga (1994) states that demand for real estate is derived demand that is it is derived from the basic needs of human beings. Space or shelter is required for all human beings. The demand for real estate can respond to changes in price but is rather inelastic as compared with other commodities. The factors, which affect demand for real estate, include:

- (a) Increase in population.
- (b) Increase or decrease in per capita income.
- (c) Changes in consumer tastes and availability of substitute products.
- (d) Amount of credit available.

One of the fundamental principles of real estate economics is the recognition that the total amount of land is fixed. So in effect the supply of land is fixed. Syagga, (1994) argues that though the supply of property is difficult to increase in the short run (inelasticity of supply), the supply of a particular type of landed property can be increased or decreased in the long run. The factors that affect the supply of land are Planning Regulations through Land Planning Acts and Building Regulations.

Other factors include time in terms of construction period, place that is the fixed location characteristic of real estate and substitution. The latter refers to the degree or extent in which one real estate category can be converted into another use in order to meet shifts in demand.

### 2.2.3. The Real Estate Market

A market is defined as a place where buyers and sellers meet to exchange items of value. There are two types of markets; a perfect and an imperfect market. A perfect market is where there are many buyers and sellers bidding against each other for available goods and services. The goods offered are similar enough so buyers will select the lowest priced offering. Subsequently, prices will be established purely by principles of demand and supply. An imperfect market is the opposite of a perfect market where there are few buyers, the goods offered are few, and the buyers have no perfect knowledge of the products offered in the market. In practice most markets are imperfect. Some of the characteristics of the perfect market are missing or distorted thereby preventing the principles of supply and demand to operate efficiently.

The physical institutional and economic characteristics of real estate along with its market attributes all work in concert to make real estate markets relatively inefficient. Stated in another way, the time and money costs of overcoming space and of collecting and analysing data all work to make real estate markets less efficient than most other markets. Mackenzie and Betts, (1976). These market attributes include:

- **Localised competition:** Immobility, heterogeneity and durability cause competition for real estate to be area specific. Localised competition is more true of residential properties than of commercial investment and industrial properties.

- Stratified demand: People generally seek and use real estate for a specific purpose. A purchaser looking for a single-family residential property looks for one.
- Confidential transaction: Buyers and sellers usually meet in private and they're offering, bid and agreed prices are not freely disseminated. Decentralised and confidential transactions make market information difficult to collect and therefore costly.

The real estate market place, gathers together a wide variety of individuals, institutions and government units with varying resources, skills and objectives. In view of the enormous importance of real estate in the political, economical and social life of the nation, this is not surprising. The real estate decision-maker must have a clear understanding of the demand and supply considerations arising from the relationships among these groups that affect real estate markets. Only when all the participants roles in the market place are viewed in their proper perspective can effective analysis for real estate decisions occur Wurtzebach, Miles and Cannon, (1995).

### 2.3. VALUATION OF REAL ESTATE

Valuation is about translating the rationally assessed requirements of the average property buyer into a value estimate. It is principally concerned with the determination of the value of immovable assets in land and buildings at some point in time, for some purpose, under some specific circumstances Syagga, (1994). For anything to have value, it must have the acronym "DUST" namely:



- Demand-- there must be a desire for that item.
- Utility-- it must have some use
- Scarcity-- there must be some limit to its supply
- Transferability-- if it cannot be sold, it has no value

Valuers of residential properties start with a given property at a certain location and then try to determine a value figure that reflects the current attitude of typically informed users and investors as to the probable future utility of that property. The determination of this value figure is usually accomplished through a valuation process. Pg.68 Syagga, (1999) refers to this process as a praxeology i.e., a method of deductive reasoning that starts from first principles of priori logic and builds analytical means from them to achieve valid deductive inferences. Therefore, a valuation method must have a premise otherwise the conclusions are invalid.

### 2.3.1 The Valuation Process

The valuation process is not merely a technical agenda followed only by the professional valuer. It is also the analytical process that any experienced investor will go through when looking at a property. Kinnard JR calls it “a systematic framework of analysis, a judgmental model to a set of data dictated by the nature of the problem. The objective is to reach a conclusion or estimate of value as defined”(1971) He continues to describe the valuation process as a research project that involves four steps

- prepare an outline
- assemble materials for analysis both market data and property data

- apply appropriate tools of analysis
- Apply judgement to reach a conclusion, a selection in terms of decision standards.

Appraisal Institute describes the valuation process as a funnel. The valuer starts with the defined problem and sifts through both general and specific data to arrive at a final opinion of value of the subject property. A valuation process is shown on Pg.69.

Syagga, (1994) outlines the process as:

- carrying out a survey of the property by collecting all the information available including legal, physical and income aspects
- Collecting data and information necessary for the analysis of activity in the real property market.
- analysing the data to obtain value estimates  
Making estimates of value for the subject property
- Writing the valuation report showing the value estimate.

Irrespective of the author, the appraisal process would be summarized as follows:

- 1) Identify the problem in terms of client, purpose of property to be valued, its legal and geographic characteristics of the property to be valued. That is collecting all the pertinent data relating to the problem or instructions.
- 2) Gather the data relating to the property, the market of that property and the market of residential properties.
- 3) Organisation and analysis of the data to arrive at a value opinion.

## Valuation Data gathering and analysis

The terms data and information are used interchangeably in every day speech. However, the terms have distinct meaning.

1. Data are facts, events transactions and so on which have been recorded. They are inputs or raw materials from which information is produced.
2. Information is data that has been processed in such a way as to be useful to the recipient.

In general terms, basic data are processed in some way to form information but the mere act of processing data does not itself produce information.

Frequently, considerable attention is given to the methods of processing data whilst the quality of the source data is mistakenly taken for granted. If the source of data is flawed then the resulting information will be worthless Lucey (1991).

There are certain characteristics of good information, which are:

- Relevant to the problem at hand
- Accurate so as to be useful to the user
- Complete in the sense of having all the information needed to make a decision
- Confidentially sourced
- Communicated correctly
- Well timed so when it is needed for use it is available
- Correctly detailed such that it is sufficient for decision making

Lucey (1991).

The data that is required in a valuation process can be classified as property and non-property data. The latter includes the following:

- Physical and environmental data with reference to physical characteristics, topography drainage
- Demographic and social data nature and characteristics of population homogeneity of cultural interests and percentage of home ownership.
- Economic data. This relates to personal income homogeneity of professional or business activities.
- Property data would refer to the subject property as well as the sales data of comparable properties.

#### 2.4. PRINCIPLES OF VALUATION

There are three major principles of valuation, which to some extent dictate the methods of valuation to be used in assessing the value of a property. Like value and valuation, the definitions of these principles have been areas of contention.

##### 2.4.1. The Principle of Highest and Best Use

There are many definitions of highest and best use. Highest and best use is the basis for a wide range of investment decisions and appraisal measures. It is that reasonably proximate use which will support the highest present value Kinnard & Messner, (1973). The Appraisal Institute, (2000) defines highest and best use as “The reasonably probable and legal use of vacant land or an improved property, which is physically possible, appropriately supported, financially feasible and that results in the highest value”.

The four criteria the highest and best use must meet are legal permissibility, physical possibility, financial feasibility and maximum profitability. In other words, the highest and best use value of the land though vacant is the highest return to the land after the three other agents of production have been compensated. To determine the highest and best use value, the valuer must assume that the property is vacant. So the question to ask is “if the land was vacant what would be constructed on the site?” The second determinant of the highest and best use as improved is what would be the optimum use of the buildings. In order to determine the optimal use of land, careful analysis of all reasonable alternative uses must be made. Three important points should be noted:

- surrounding land uses are not always indicative of optimum use
- the existing use may not be optimum
- Current zoning may not be consistent with the property’s highest and best use.

The principle assumes that the residential property will be used to the best of its characteristics and suitability. If a residential property is not utilised to its highest and best use, then it will most likely be underestimated in value. The implication, therefore, is that for an appropriate valuation to be carried out, the property is assumed to be utilised to its highest and best use. This makes the principle of highest and best use to be the most fundamental in the valuation of residential properties, and as Swazuri puts it “Highest and best use is a dynamic concept dependent on changing market conditions” (1996).

This principle is basic in all the three major approaches to valuation. It states that when similar or commensurate commodities, goods, or services are available, the one with the lowest price attracts the greatest demand and widest distribution Appraisal Institute, (2000). Kinnard and Messner add that the upper limit of value of a property tends to be set by the cost of acquisition of an equally desirable substitute, provided there are no delays in affecting the substitution. A prudent purchaser would pay no more than the cost of acquiring such a substitute on the open market (1973). That means, property values tend to be set by the cost of acquiring an equally desirable substitute.

#### 2.4.3. The Principle of Utility

For a property to have value, it must have utility, it must be scarce and purchasing power on the part of the would-be buyers must be there. Utility refers to the manner in which a property could be of use: if the property is useless, or has no possibility of being turned into alternative use then it cannot command any value. Scarcity refers to demand, the desire to purchase a property. The more scarce a property or service, the more valuable or expensive that property or service becomes. An oversupply of a good or service removes scarcity and places the good or service within the reach of more would-be purchasers. Scarcity gives rise to value Millington, (1975).

Residential properties satisfy the human need for shelter and may provide amenities that enhance the quality of life. The value of a residential property is usually related to its desirability and utility to owner-occupants which may be converted into income in the form of rent.

The utility and benefits of a property ownership are derived from the legal rights that the owner possesses. Restrictions on ownership rights can inhibit the flow of benefits and influence the property value. Environmental regulations zoning or land use regulations deed restrictions and other limitations on the rights of ownership can enhance or detract from a property's utility and value.

## 2.5 MARKET VALUE CONCEPT

Value can have many meanings in real estate valuations. The applicable definition depends on the context and usage. However, when a valuer uses the word value he would normally be referring to market value which is defined as "the money obtainable from a person or persons willing and able to purchase an article when it is offered for sale by a willing seller" Millington, (1975). Kingoriah, (1980) on the other hand argues that market value is the amount of money that can be used to purchase any piece of land whether developed or not, and this is what is called market value.

Value itself occurs in several ways.

1. The price which a property will bring in a competitive market under all conditions requisite to a fair sale, which would result from negotiations between a buyer and seller, each acting prudently, with knowledge and without undue stimulus (Quoted by Swazuri, 1996 from SREA, 1960).
2. The highest price in terms of money which a property will bring if exposed for sale on the open market with a reasonable time to find a purchase, buying with full knowledge of all the uses to which it is adapted and for which it is capable of being used Kinnard, (1971). Syagga, (1994) states that market value may be defined using two main classifications:

(1) Utility value, which is the value to the owner-user, which includes the value of the amenities, attached to the property as in the case of owner occupied.

(2) Market value which is the value in exchange, the amount of money at which property can be sold or exchanged at a given time or place.

The Market value concept is central to the comparative approach to property valuation for it is the basic method of estimating the market value of landed properties. The reference is to Open Market Value, which is defined by various Valuation or Appraisal Institutions as follows

The American Institute of Real Estate defines Open Market Value as “the most probable price in terms of money which a property should bring in competitive and open market under all conditions requisite to a fair sale, buyer and seller each acting prudently, knowledgeably and assuming the price is not affected by undue stimulus”.

The Royal Institution of Chartered Surveyors (RICS, 1997) has similarly defined Open Market Value as an opinion of the best price at which the sale of the interest in property would have been completed unconditionally for cash consideration on the date of the valuation assuming

- A willing seller.
- A reasonable time to negotiate for sale.
- Values remain static between the date of sale and date of valuation.
- Both parties to the transaction had acted knowledgeably, prudently and without compulsion.
- No account is to be taken of an additional bid by a special purchaser.



The Institution of Surveyors of Kenya (2000), adopts the definition of the current market value as that settled by the International Valuations Standards Committee (I.V.S.V.):

“The estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arms length transaction after proper marketing wherein parties had each acted knowledgeably, prudently and without compulsion”.

Irrespective of the definition however the market value is premised in the economic principle of substitution in the sense that when similar properties are available the one with the lowest price attracts the greatest demand and widest distribution. Thus, a buyer will not pay more for one property than for another that is equally desirable. This means in effect that a valuer should have correct data on available properties so that the purchaser will be able to make the right choice. All data in a valuation process of residential properties, using the comparative approach, is important and provides the following:

- The background against which the specific property is valued
- Information from which to infer possible trends affecting property values.
- Data used in the valuation process.
- A basis for judgement about the highest and best use and reconciliation of all the data used in the valuation using the comparative approach.

Market value does not necessarily equal market price. Infact the market value for a property may be greater than/equal to, or less than the sale price in an actual market transaction. Market price is a historical fact.

Market value on the other hand is an estimated price made by an objective experienced knowledgeable valuer and is the present equivalent of some future benefits.

Market value may also be greater than/equal to, or less than the cost of the property. As used here, cost means the capital outlay (including overhead and financing expenses) for land, labour, materials, supervision and profit necessary to bring useful property into existence. In valuation, cost means cost of production not cost of acquisition.

Another concept of value is value in use against value in exchange. The worth of a property based on its utility to a specific user is its value in use. The utilities may be from expected amenities income or value enhancement. Value in use depends on the unique judgments, standards and demands of the user and is independent of identifiable market information. Value in use is also subjective value meaning is dependent on the nature and mental attitude of the person making the judgement. On the other hand, value in exchange is the amount of money or purchasing power (in goods and services) for which the property might most probably be traded. Such exchanges do take place and prices do result. Valuers adopt these figures analyse them and make estimates of value for other properties hence value in exchange may be termed as objective value. The value of a residential property would best be explained as value in use for the utilities derived from a residential property are varied and have significant effect on the market value of the property.

## 2.6. METHODS OF VALUATIONS

Despite major changes in attitudes and perception of the property ownership and development the valuation methods have essentially remained the same throughout the country. Quoted by Syagga, (1999) from (AIREA, 1987), (Britton, 1987), (Friedman, 1978) and (Murray, 1973). The three traditional methods of valuation are as follows:

1. Income Approach
2. Cost Approach
3. Comparative Sales Approach

All methods of valuations that apply should be used in the valuation assignments. Sometimes all three approaches are pertinent and provide reliable indications of value. The decision about which approach to adopt depends on the kind of data that is available to the valuer. Kiptoo, (1999) states that “adequate data would lead to simulation of most probable price while inadequate data would lead to adoption of the normative value definition.”

### 2.6.1. The Income Approach

This is expressed in a formula:

$V = A/R$  where V is the present value A is the annual rent and R is the capitalisation rate.

All methods of valuations that apply should be used in the valuation assignments. Sometimes all three approaches are pertinent and provide reliable indications of value. In other cases only one or two approaches may be applicable.

The Income Capitalisation Approach is predicted on the principle of anticipation which holds that the present value is indicated by the expectation of future benefits Appraisal Institute (2000). The method is used for valuation of income producing properties. In income analysis, a distinction is made between rental income and owner operated income.

The valuer must research the expected gross incomes, vacancy and credit losses operating expenses patterns and or duration of income streams and anticipated resale values or appreciation rates for properties similar to the property being valued. Whenever an income estimate is used in deriving a rate to value property the rate must be appropriate and consistently applied.

There are two methods used in the valuation process using the income capitalisation approach.

- (a) Direct capitalisation which is the method used to convert an estimate of a single year's income expectancy into an indication of value in one direct step either by dividing the income estimate by an appropriate rate or by multiplying the income estimate by an appropriate factor. The capitalisation rates and multipliers are extracted from sales.
- (b) Yield capitalisation is the method used to convert future benefits into a present value by discounting each future benefit at an appropriate yield rate or by developing and applying an overall rate that explicitly reflects the property's income pattern value, change and yield.

The valuer is concerned with two variables the average annual rent for that property and the capitalisation rate. These variables are derived from market sales of similar properties in the neighbourhood hence the use of comparables.

### 1. Residual Method

This method is rather similar to the Income Approach, in that the property is assumed to be developed to its highest and best use, such that a gross income is estimated. The expected costs are subtracted from this gross income, and the profit margin is obtained. Govern the value of the finished development, the cost of producing it and the profits expected, the difference represents the sum which can be paid for the land. This sum represents some sort of residue hence the name Residual Method.

This method was born out of the reasoning that developers are constantly destroying and replacing property to meet the changing needs of users. In such developments and redevelopment, one could easily arrive at their value by direct comparison with the sale or rent or similar or almost similar property, which is to be developed in a like manner. But in many instances, this may be impracticable due to the unique nature of the property in question and the proposed development.

### 2. The Profits Methods

This is almost like the Residual Approach in that it is applied to value properties which are so unique that comparison with other similar properties is not possible e.g. a petroleum-filling station. The amount of business sales in such properties determines the amount of profits and the profits in turn determine the price someone will pay for the property.

Therefore, the amount of the profits is capitalised, just like in Income Approach, to obtain the capital value of the property.

The above are the main methods of valuation, but as already hinted, these methods could be used in combination to value a type of property which does not lend itself to one method of valuation.

### 2.6.2 The Cost Approach

This is called the Summation Method. By definition the total value of the property will be equal to the market value of land or site added to the cost of the improvements on that land Swazuri (1996). The method is rooted in the early classical assumption of a close relationship between production cost and value.

It is premised on the principle that a property is worth the cost of producing an alternative property of similar utility. Syagga, (1999) No investor will purchase a property if the price of that property is over and above the amount of money he can spend to create an equivalent property Swazuri, (1996).

It should therefore be noted that it is this method used only infrequently and which is something of a last resort. The basic theory is that the cost of the site plus the cost of the buildings will give the value of the land and buildings as one unit. Millington, (1975). This method is used for special purpose properties which are not sold in the market and when there is a distinct lack of market transaction (Connellau and Baldwin, 1992).

In using the contractors method, the valuer must therefore make a deduction to allow for both depreciation of the buildings and obsolescence of design. The basic valuation approach then becomes:

	Cost of Site
Plus	<u>Cost of Buildings</u>
Less	Depreciation Allowance and Obsolescence Allowance
	-----
	Value of existing properties

The cost of buildings is obtained using the following methods:

1. Quantity surveying method.
2. In-place unit-cost method (Unit costs of component parts).
3. Unit cost method (overall building unit cost per square metre or cubic metre).

From the estimate costs of improvement deductions are made for spent utility which has three components each of which needs separate calculations namely:

- Physical deterioration
- Functional obsolescence
- Economic obsolescence

The cost of site is obtained from market sales of similar sites in the neighbourhood.

The replacement cost approach also adopts elements of comparative approach in that the cost of producing or creating a duplicate or replica improvements or buildings on the basis of current prices using the same or similar materials Swazuri (1996). This is obtained on the basis of comparison of the unit costs. The market value of land is obtained from comparable sales of vacant plots and therefore market data of vacant plots is required in the valuation of using the replacement cost approach.

## 2.7. THE SALES COMPARATIVE APPROACH/METHOD

The method is referred to as market approach, market comparison approach, sales comparison approach etc. The nomenclature is of no significance; the technique remains the same.

It is the simplest and most direct approach in arriving at a value. It involves comparing the property to be valued with the prices obtained for other similar properties Lawrence and Rees, (1978). Syagga, (1994) says that “the comparison approach provides a basic method for estimating the market value of landed resources. it is the most realistic of all valuation methods”.

The Appraisal Institute (2001) defines sales comparison approach as a set of procedures in which the valuer derives the value by comparing the property being valued to similar properties that have recently been sold applying appropriate units of comparison and making adjustments to the sale prices of the comparable sales.

The technique is based on the principle of substitution which states that “the cost of acquisition of an equally desirable substitute property with undue delay ordinarily sets the upper limit of value” Appraisal Institute (2000). Thus a buyer will not pay more for one property than for another



that is equally desirable. Therefore the prices paid for similar or comparable properties at any given time reflect the market value of a property being valued.

Mugo, (1987) states the three basic assumptions on which the comparative approach is based on:

- That there is a market for a similar property.
- That both the buyer and seller are fully informed as to the property and the state of the market for that type of property.
- That the property would be exposed in the market for a reasonable period of time.

The nature and characteristics of real estate makes the above assumptions unachievable and therefore calls for recognition and analysis of uncertainty in valuation. Given the varying degrees of uncertainty in valuation, it is imperative to add the probability dimension to assist consumers of valuation reports.

#### 2.7.1. The sales Comparison Approach Procedure

Swazuri, (1996) states “the process of estimating value by the comparison method entails four steps:

1. Analysis of the property to be valued: This is done in terms of the property’s best use and potential uses, its physical characteristics, location factors, market trends, regulations and restrictions affecting the property. And so on.

2. Selection of comparable properties: Other property having the same or nearly the same characteristics as the subject property are selected. And these comparables must be properties that have been sold in the open market or those for which offers for sale or purchase have been made.

3. Analysis of comparable properties: Information to be analysed for the comparable property includes the number of sales involved, the period the sale took place and the economic climate at that time, and the motivating forces behind the sale, if these can be discovered.

4. Comparison of subject property with comparable property: Comparison between the two is made either on an overall area basis or by the use of cubic units of area. Like will always be compared with like, and the similarities should be in terms of use of the properties, location, design and age, size and accommodation, the market conditions prevailing during the sale of both properties and the nature of transactions.”

The quality of data and information a valuer collects is proportional to the quality of judgement. Therefore, the process of gathering and analysing data must be ongoing and subject to constant updating and re-examination (Appraisal Institute, 2001). The procedure is therefore as follows:

(a) Collect data on sales of comparable properties

The major consideration in comparable sale selection is the degree of comparability between the sale property and the subject. The valuer looks for sales that are representative of the probable market for the subject property. A good question to ask is “could the circumstances surrounding the sale be duplicated on the subject property?”

In selecting comparable sales the valuer should choose data from the market area in which the property being valued is located. Market areas vary depending on property types.

Wameyo, (1992) confirmed from field survey two sources of data for valuation of residential land:

- Other valuers: Valuers can call up their colleagues in other firms and ask them for comparables.
- The media: A valuer can easily look at the classified section of local newspapers and find out the rate at which plots in neighbourhood are being sold.

Other sources of data available to the valuer as provided by Khan, Case, and Schimmel, (1963) include:

- Records kept by the valuer on sales handled by them.
- Estate agents.
- Deeds or Land Office
- Buyers and sellers
- Published record of transaction by private organisation.
- Newspapers and property magazines.

In the United States of America a further source of comparable sales data is Local .

In the USA a further source of data is the Local Multiple Listing Service (MLS). This is a joint brokerage facility that records all sales transactions and the data is available to valuers who subscribe to the facility, (Appraisal Institute, 2001).

#### (b) Select, verify, and adjust the sales data

To develop valid market value conclusions, the process of comparison and adjustment must be based on sales that represent typical interaction within the market in which the subject property would be offered and sold. Each transaction must be verified with one of the participants involved.

The correct number of comparables depends on the competitive nature of the market. If a market has many buyers and sellers, it is doubtful that the prices paid for properties will vary much therefore only three or four comparables are enough. If the subject property is less popular it will have The Uniform Standards of Professional Appraisal Practice (USPAP) standard states “In developing a real property appraisal, an appraiser must identify the problem to be solved and the scope of work necessary to solve the problem and correctly complete research and analysis necessary to produce a credible appraisal” (Rattermann, 2000).

If a valuer uses only three comparables and one or more of the comparable does not turn out to be correct, this standard could be a big problem. A valuer who provides five or six comparable sales is at much less risk of having a verification problem if some of the data provided from the broker or other sources prove erroneous.

To ensure valid market value conclusions, the process of comparison and adjustment must be based on sales that reflect the typical behaviour of participants within the subject market.

### (c) Identify unit of comparison

Valuation is an opinion and it follows that the opinion of the valuer in identifying the units of comparison will affect the value judgement. It is recognised that there are many opinions in this area but valuers find difficult in the following:

- a) Expressing and supporting opinions in a logical manner.
- b) Finding a consistent and logical approach to the process so they can follow same thought process and come to similar conclusions in each valuation.

The elements of comparison (differences) are listed by Britton et al (1989) as location, physical state (condition of the property), tenure, purpose, (of valuation) and time.

Syagga, (1994) lists these elements as “use of the property, location (characteristics of the neighbourhood---) and income related factors.”

The American Institute of Real Estate Appraiser (1974:314) lists the elements of comparison as “financing terms, conditions of sale, market conditions (time), location, physical characteristics and income characteristics”

Wurtzerbach, (1995) identifies units of comparison as being property and non-property characteristics. The property characteristics of value relate to location, size of land, size of building, type and quality of construction, the terrain of the site, the design, the age and condition of the improvements and the interior configuration. Non property characteristic relate to verified sale prices, date of sale, financial terms and conditions of sale.

Linne & Others, (2000) considers the units of comparison as type of data that the valuer requires and classifies it as qualitative and quantitative data. In view of the emphasis on computer as a tool of analysis of data, and with the onset of computer-aided appraisal or valuation techniques, the units of comparison using statistical terms is more appropriate. The qualitative

units of comparison would refer to the subjective characteristics of residential properties such as type of building, quality and condition of finishes, environment factors such as view, natural resources, etc. The quantitative units would refer to objective attributes such as sale price, size of plot, age of building, size of the building. That means these objective attributes can be measured in quantities and these quantities are easy to compare. The subjective attributes are not measurable in quantities and are therefore difficult to quantify.

Ngugi (1988:31) states the units of comparison on the sales comparison approach as:

- the size of the building say a residential house with three bedrooms
- the location of the property and the neighbourhood.
- the building structure regarding the design, the quality and the age as well as
- the shape of the building.
- relationship of the market conditions and climate of the past value and the current value. One cannot compare a property sold under a depressed market environment with another to be sold under a boom period.

In summary, the elements of comparison and which The Appraisal Institute of Canada has adopted may be summarised as follows:

- Terms and conditions of sale.
- Time of sale
- Location.
- Property characteristics.
- Zoning/land use designations
- Financing terms

These elements of comparison are used in analysing data and typically include variations that must be addressed in the comparison process. After describing each comparable sale and understanding the key characteristics of the comparables and the subject, the valuer must adjust the selected units of comparison for the differences between the various properties. The final result is the adjusted sales price, which is the analyst estimate of what the comparable would have sold for had it possessed all the salient characteristics of the subject property as at the date of the valuation.

#### (d) Analysis of data

This is also referred to as identification and measurements of adjustments. “The validity of the sales comparison approach depends on an adequate data sample representative of the market and comparable to the subject property and on the ability of the appraiser to measure differences between the sales and the subject”. (Appraisal institute, 2000).

The most important part of any valuation is the analysis of available data from the market. The valuer should conduct a very thorough review of the real estate market before selecting comparable sales and other important data necessary to complete the valuation report.

The data analysis performed in the sales comparison approach should lead the reader of the report through the development of land class ratio and land adjustment analysis if applicable and through the paired sales analysis which is performed to ascertain the degree or magnitude of the adjustments required for various elements of comparison. The analytical techniques available to the valuer include: -

(i) Quantitative Techniques which include:

Bracketing

This is a way to study the relationships indicated by the market data without making mathematical adjustments. This technique is sometimes used in complex real estate markets. To apply this technique, elements of comparison are identified and the comparable sales; characteristics are compared with the subject and ranked as superior, inferior, or equal. This analysis is very similar to paired sales analysis except the adjustments are not expressed as specific dollar or percentage amounts.

(ii) Quantitative Techniques

When quantitative techniques are applied the valuer uses mathematical processes to identify if an adjustment is necessary and to estimate the amount of the adjustment.

The quantitative Techniques include:

- Adjustments
- Paired sales analysis
- Statistical analysis
- Graphic analysis
- Trend analysis
- Cost approach techniques.



- **Regression Analysis**

(a) Adjustments

There are three basic methods of adjustment which are traditionally used and these include:

- Plus/minus shilling adjustment where the differences in the property and the comparable can be measured in shillings. This would refer to a property with a swimming pool being compared with one without a swimming pool.
- Plus minus percentage adjustment. This is the same as a) but the differences are expressed in percentages.
- Cumulative percentage adjustment or factoring where the percentage adjustment is expressed as a decimal and each factor is multiplied by the preceding factor to arrive at a cumulative factor representing the total adjustment which is then applied to the unit of comparison or sale price. This method is based on the assumption that there is a relationship between the various factors making up the value of the property and the forces in the market are interrelated.

For an adjustment procedure to succeed the units of comparison must be the same.” If there are unadjusted differences for any of the units of comparison the client would be left with a nonsensical conclusion of value’ (Boykin 2001:49)

(b) Paired Sales Analysis

This is a process in which two sales are compared to measure the amount of difference between them due to a particular element of comparison. For this technique to be accurate, the sales must be similar in every respect except the element being measured. When such sales

are not available, dissimilar sales may be used in paired sales analysis if sufficient market evidence is available to adjust the sales beforehand for all dissimilar elements except the one for which an adjustment is sought. However, the more adjustments that have to be made prior to the paired sales analysis, the more suspect the results of the analysis become.

The best example of paired sales analysis is the sale and resale of the same property. Assuming there has been no material change in the character of the property, the only variation is the time that elapsed between the sales. The difference in the prices of the two sales should then indicate the market trend in prices over the time interval. When a sale and resale are not available, the appraiser can look for otherwise similar properties that were sold at different times. Multiple regression is good tools for analysing certain market situations. The effectiveness of regression analysis is limited when a large number of factors influence sale prices.

Some critics of this method suspect that this price adjustment technique has been applied more often in classrooms than in appraisal offices. Rarely will valuers discover sets of property sales that can be analysed in a manner that reveals the value of different value –influencing components. Yet when used with awareness of its imprecision this method can provide corroborating support for a Valuation (Boykin 2001).

(c) Graphic analysis is a type of statistical analysis in which sales data is plotted on a graph and the appraiser arrives at a conclusion by visually interpreting the graphic display.

(d) Trend Analysis involves the use of large amounts of data. It is useful when there is a shortage of good comparable sales, but a large amount of general data is available. Trend analysis is especially useful for analysing trends in value levels over time. Total sales activity for regions or states can be entered into a computer sales database and catalogued according to various market characteristics, including highest and best use.

(e) Cost approach techniques are sometimes used to make adjustments relating to improvements when improved sales are lacking. This is an acceptable technique, assuming the improvements do not represent the major portion of value and an adequate market search was attempted to uncover similar improved sales. However, the sales comparison approach should be an independent approach. If major adjustments for the sales comparison approach come from the cost approach, sales comparison ceases to be an independent indicator of value. If improvements are the major part of property value and the only way the sales comparison approach can be applied is to use cost approach techniques, the appraiser is probably justified in not applying the sales comparison approach at all.

Ngugi (1988) contradicts this process for he says that the process contains two parts that is allocating the value between land and buildings “The valuer first compares the value of land with similar land sold therefore. He then compares the value of the buildings or developments with the prices obtained in the past for similar developments”

Rottermann, (2000) states that this is the least quoted but the most often used by valuers. Although it does have its problems” it is, quick, logical, natural and supportable”.

It should be noted that the valuer using this method of analysis appreciates the theory of consistence use which states that land cannot be valued on the basis of one use while the improvements are valued on the basis of another Rottermann, (2000). This theory applies to residential properties, which have a hope commercial value due to their location characteristics

#### (f) Regression Analysis

Regression is the ability to estimate the value of one variable given as a value of the other. It is concerned with obtaining a mathematical equation describing the relationship between two variables. The equation obtained can be used for comparison or estimation purposes. There are two types of variables in a regression analysis: the dependent variable (Y) and the independent variable (X). The relationship between the two variables can be expressed as  $Y=B_0+B_1X$  where  $B_0$  is the regression constant and  $B_1$  is regression coefficient or value rating for the independent variable. In valuation, the (Y) variable is the price or value of the property and the X is the factor that affects the value expressed in a mathematical equation.

A simple regression is where only one variable is used for example the area of the property. The equation would be as follows  $Y=B_0+B_1X$  where Y is the dependent variable in this case the value of the property and X is the independent variable in this case the floor area.

Multiple regression is an extension of the simple regression analysis where more independent variables are considered such that the mathematical equation is as follows:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + \dots \text{etc}$$

In the valuation of residential properties, the independent variables to be considered would be not only the floor area but the accommodation details, title, services etc.

This method is applicable to all methods of valuations and should not be considered as a method on its own but a supplement of the valuation process. Swazuri quotes Locke as saying "The comparable sales approach appears to represent the common framework in which computer assisted statistical methods of valuation are developed. Regression models using cross sectional and time-series data are based primarily on comparative sales. (1987). In the comparative approach, the regression analysis would be used to analyse sales data in order to determine the contribution of the various units of comparison on the market value of the residential properties.

Wameyo, (1992) used the method to determine the factors that influence the value of up-market residential plots. Rimber, (1986) used the method to determine the factors that affect the value of residential properties.

Regression models provides the valuer with the ability to test the real estate market objectively to determine which variables are influencing the price paid for the comparable sales collected and how much weight to place on each. The valuer actually does the same traditional market approach but usually applies subjective weights to the variables. One of the drawbacks of regression analysis is that it requires a lot of sales data approximately 20 to 30 sales and 10 or more variables that affect the value. The advantage is

that it explains, estimates and also assist in value related research Swazuri, (1996).

### 2.7.2 Final Value Opinion

The valuation returned by a valuer is an opinion of value. Although it is an opinion, it is impartial expert and reasoned conclusion formed by a trained professional based on an analysis of all relevant evidence. The value represents the valuer's perception of the most probable price reached in an arm's length transaction subject to the qualifying conditions. The final figure is not derived by simply applying technical and quantitative procedures, rather it involves the exercise of judgement. The value reached must be consistent with market thinking and the quantity of data used should correspond to the amount of data the market considers relevant to the problem.

The valuer produces a meaningful defensive value opinion by considering three criteria: appropriateness, accuracy and quantity of evidence.

Appropriateness relates to the data and the manner in which it is processed to conform to the market for the property or the function of the report. All data calculation estimates and adjustments are examined for accuracy. The quantity of the evidence is examined to determine if the conclusions are adequately supported. Market data usually reflects the past but the valuer must rely on such data when estimating value, which is the present worth of future benefits.

The final figure is based not only on technical and quantitative analysis but also on the experience of the valuer. The conclusion must be consistent with and representative of market thinking concerning the property and the

assignment. As Millington says “it is getting to the stage of being able to put opinions into a mathematical form which presents the problem-searching for all the facts concerning the property interest and the area in which it is situated considering all these facts and subsequently forming opinions”(1975).

### 2.7.3 A critique of the Sales Comparison Approach

Despite its wide application, the Comparison Method has a number of drawbacks. Some have argued that the method is based on ‘past information which has no relevance in “present calculations” and that it ‘produces a form of spot price reflecting historic transactions which may have been based on the rational utilisation of the available information set then’ Lizieri and Rowland, (1993). There are always doubts as to whether such rationality and information would be similar to the present situation.

Other valuers, such as Wiltshaw, (1993), argue that the Comparison Approach assumes, almost religiously, that past information is accurate, that ‘Realised sales prices are considered to be exactly as stated. The characteristics of comparables are also treated as though they are measured precisely. This is assumed whatever the particular measurement scale is used: a continuous characteristic eg. gross external area, is considered to be as accurately measured as a binary characteristic .. Similar remarks apply to the property to be valued’. Thus the method makes sweeping assumptions, most of which may not hold in all situations.

The reliance of the Comparison Method on past (comparable) information appears to have attracted the most of criticisms. It has to be assumed that during the usually long marketing period there is no change in value.'

Wiltshaw, (1993) comments on what determines the appropriate number of comparables? Which (particular) property characteristics do we use to adjust comparable prices? Why is it possible for adjusted comparables to be different if they reflect a common base, and how is the final value of the property determined? And if adjusted comparable prices differ, isn't there an additional subjective element in the determination of the final valuation?

Another weakness of the Market Data Approach is its requirement that 'like should be compared with like', which strictly emphasises comparability in every sense of the word. Swazuri (1990) argued that comparability is not always easy to obtain. Indeed there is a truism in the real estate world that no two properties are exactly alike and this makes valid comparisons a difficult matter, even in the case of vacant waterfront sites where there may be a lot of recent transactions available as yardsticks. The worst part is when motivations for exchange of property are to be compared, and when the conditions during the transactions have to be ascertained. Adjusting the comparable sales price to reflect these aspects is 'almost' impossible.

In general, therefore, there is much in the Comparison Method to make it analytically weak, ad hoc, covert and at least ambiguous. But the method continues to survive, and its use is entrenched into almost every valuation audience world-wide. This is partly due to the fact that 'there

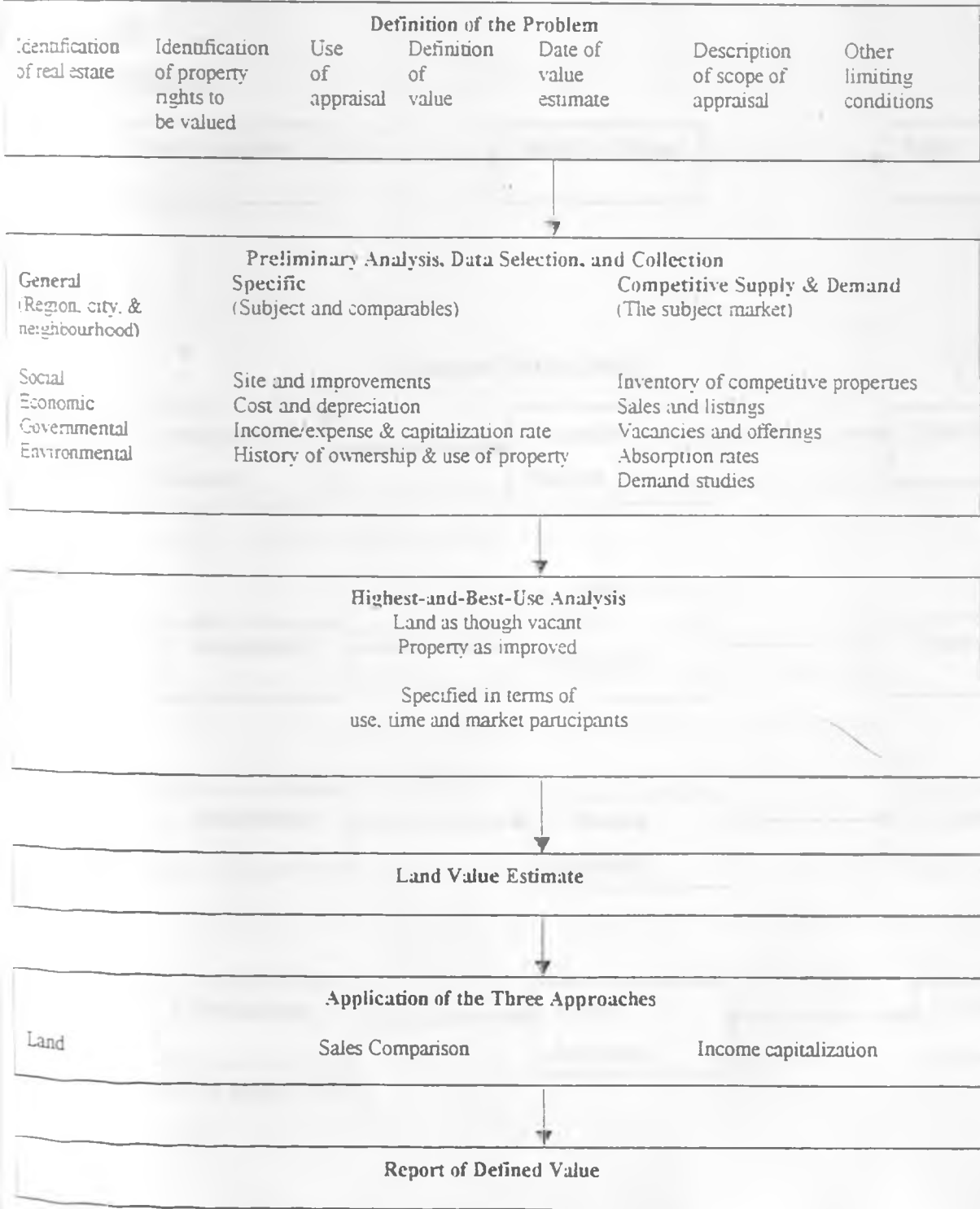


does appear to have been a (high) degree of inertia in so far as there has been no significant critique of its analytical structure Wiltshaw, (1993). Upto now, no follow-ups have been made on the weaknesses of the Market Data Approach to practically discredit it. The method is, therefore, straightforward, the adjusted comparable prices 'sympathetically' reflect the particular features of the property to be valued, and valuers feel that because they understand the method's dangers, they can take care of them. The foremost rationale for using the Comparison Approach, is that buyers and sellers will behave today as they did in the recent past if market conditions and all other relevant factors are the same' Arguable, therefore, many valuers tend to submit that even with its limitations, the Comparison Method is the most reliable for predicting the behaviour of market participants.

## 2.8. CONCLUSIONS

The value of a property is a fact to be ascertained, based on the purpose of the valuation, the priori logic behide the valuation and the adequacy of the data to be used in the valuation estimate. The valuer should therefore not prepare a valuation to suit the client but to ascertain the true value of the property. Comparables must literally be dissected to gain insight into buyers and sellers motivation as a basis for analysis. The principles of valuation must be understood and applied to the valuation problem.

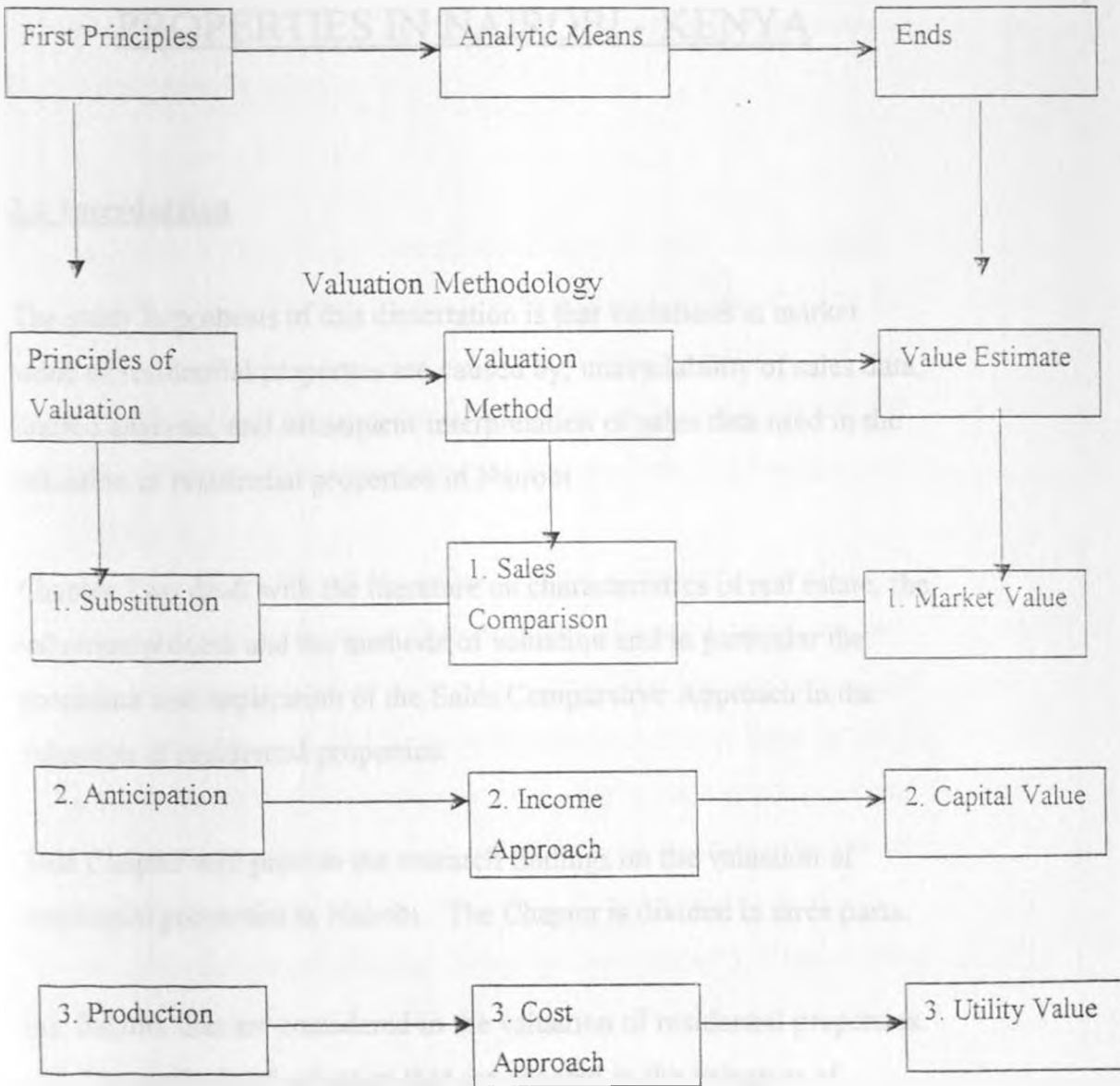
# The Valuation Process



Source: Appraisal Institute. *The Appraisal of Real Estate, 10<sup>th</sup> ed.* Chicago:AI, 1992 p.73

Logic of Valuation Methodology described by the three approaches to value.

Praxeology



Source: Syagga, (1999)

## CHAPTER THREE

# VALUATION OF UP-MARKET RESIDENTIAL PROPERTIES IN NAIROBI - KENYA

### 3.1 Introduction

The study hypothesis of this dissertation is that variations in market value of residential properties are caused by, unavailability of sales data, limited analysis, and subsequent interpretation of sales data used in the valuation of residential properties in Nairobi.

Chapter Two dealt with the literature on characteristics of real estate, the valuation process and the methods of valuation and in particular the procedure and application of the Sales Comparative Approach in the valuation of residential properties.

This Chapter will provide the research findings on the valuation of residential properties in Nairobi. The Chapter is divided in three parts.

- (a) Factors that are considered in the valuation of residential properties.
- (b) The methods of valuation that are adopted in the valuation of residential properties.

- (c) A regression model to determine the significance of the factors outlined in (a) and their contribution to the value of residential properties in a similar location.

Variation is derived from the word variance and is defined as a change or slight difference in conditions, amount or level, typically with certain limits Pearsal, (1998). Variation in market value of residential properties would refer to differences in market values of residential properties within the same location.

### 3.2 Limitations

1. Since this study is about variations of market value of residential properties, a distinction between market price and market value is necessary. Market price is historical and relates to prices paid for residential properties in the selected locations. Market value is the present worth of the future benefits derived from residential properties.
2. Approximately 80% of the valuation reports submitted for the Institution of Surveyors of Kenya Diploma examinations were for properties whose market value is less than Kshs. 5.0 million. Only 10% of the reports were for properties whose market value is above Kshs. 5.0 million. Subsequently the author collected sale prices of residential properties from the selected locations from valuation and estate agents firms in order to build up data used in the analysis.
3. Location as a factor affecting value has three aspects, distance from the Central Business District, location in terms of the estate and location in terms of a street or road within the estate.

Since this a study of variations of market values within the same location, distance from CBD was not considered as a factor affecting value. However, location in terms of the estate and the streets or roads were considered as factors affecting value.

4. The valuation reports perused at the Institution of Surveyors of Kenya were inspected in line with the structure of valuation report as provided by Syagga 1994 as follows:
  - a) instructions from the client
  - b) General description of the property to include: land reference number (title), tenure, registered owner, and location of the property.
  - c) Improvements to include: siteworks, services, and buildings among others, and the necessary construction details.
  - d) Accommodation to include: number of buildings, number of rooms, and type of use.
  - e) Remarks as to the condition of the property (structural, decorative and neighbourhood).
  - f) Recommended value and signature of the valuer.

### 3.2 Factors that are considered in the valuation of residential properties

This data was obtained from examination papers submitted for the Institution of Surveyors of Kenya Diploma Examinations. A total of 150 papers were perused and out of the 150 papers only 20 were of properties whose market value was above Kshs 5.0 million. The following details were obtained from the valuation reports and the attached working papers.

(A) Property details

	<u>Frequency of occurrence</u>	<u>Ranking</u>
Date of inspection	1/20	13
L.R. Number	17/20	2
Title	19/20	1
<u>Location:</u>		
Estate	17/20	
Street/Road	15/20	3
Distance from CBD	12/20	6
Distance from shopping centre	2/20	11
Distance from Social amenities	1/20	
Planning Regulations	7/20	9
Area	17/20	2
User	4/20	11
<u>Characteristics of the plot:</u>		
Shape	12/20	6
Soils	14/20	4
Topography	5/20	10
<u>Site-works:</u>		
Gates	12/20	6
Fencing	14/20	4
Garden	11/20	7
Driveway	9/20	8
<u>Services:</u>		
Water	14/20	4
Electricity	14/20	4
Drainage	14/20	4

Telephone	5/20	10
Road Frontage	5/20	10
Security Systems	Nil	

Developments:

Design i.e. single or double Storey	19/20	1
Construction details (Foundations wall, doors etc)	13/20	5
Accommodation	15/20	3
Outbuildings	14/20	4
Condition of repair/decorations	4/20	11
Areas of the development	4/20	11
Tenancy	3/20	12
Date of construction	2/20	13

(B) Non property characteristics

The state of the market	5/20	1
Effect of interest rates	1/20	4
Characteristics of the neighbourhood	3/20	3
Comment on the design and accommodation	4/20	2

Source: Institution of Surveyors of Kenya Diploma Examination Papers



### 3.3.1. Methods of valuation and determination of value

#### Method of valuation

	<u>Frequency of Occurrence</u>	<u>Ranking</u>
Comparable Approach	4/20	2
Investment Approach	2/20	3
Cost Approach	12/20	1

#### Determination of value

Comparable Sales	10/20	1
Average of two or three methods	2/20	2

#### Number of comparable sales used

0 - 5	12/20	1
5 - 10	2/20	2
Above 10	Nil	3

#### Method of Analysis of comparable Sales

Unit Cost	5/20	1
Cost Analysis	3/20	2
Paired Data	1/20	3
Adjustment	1/20	3
Regression analysis	Nil	
Graphic analysis	Nil	
Trend analysis	Nil	

Source: Institution of Surveyors of Kenya, Diploma Examinations Papers.

### 3.3.2. Methods of valuation and determination of value

This data was obtained from interviews with valuers in Nairobi. The respondents were chosen at random from the gazette list of Registered Valuers published in the Kenya Gazette issue of May 2001.

#### Method of valuation adopted in valuation of residential properties

	<u>Frequency of Occurrence</u>	<u>Ranking</u>
Comparable Sales Approach	-	
Investment Approach	-	
All methods	20/22	

#### Methods mostly adopted in the valuation of residential properties whose value is above KShs.5.0 million

Comparable Sales Approach	5/22	2
Investment Approach	4/22	3
Cost Approach	15/22	1

#### Determination of value

Average	5/22	2
Rule of Thumb	1/22	3
State of market	1/22	3
Comparable sales	15/22	1

#### Sources of comparable sales data

From within the organisation	20/22	1
Other valuers	19/22	2

Estate Agents	18/20	3
Sellers	16/20	4
Buyers	10/20	5
Land office	12/22	6
Print media	2/22	7
Auctioneers	1/22	8

Method of Analysis of Sales Data

Unit cost	12/22	2
Cost analysis	14/22	1
Paired data	3/22	3
Adjustments	Nil	-
Regression analysis	Nil	-
Graphic analysis	Nil	-
Trend analysis	Nil	-

Number of comparable sales obtained

0- 5	18/22	1
5 - 9	3/22	2
Above 10	Nil	-

Details/Information obtained on the comparable sales data

Date of sale	11/22	3
L.R. Number/Title	10/22	4
Location	12/22	2
Planning/Zoning regulations	2/22	7
Area of plot	15/22	1
Area of main house	12/22	2

Construction details	9/22	5
Accommodation	11/22	3
Rent	5/22	6

Storage of Sales Data

Availability of Data bank	22/22	1
Mode of storage		
a)Manual (in-files)	16/22	1
b)Computerised data banks	10/22	2

Availability of sales data to:

Valuers	13/22	1
Researchers	9/22	2
Public	2/22	3

Use of data for other purposes

Preparation of Market reports	5/22	1
Research	5/22	1

Source: Interview with Registered Valuers in Nairobi.

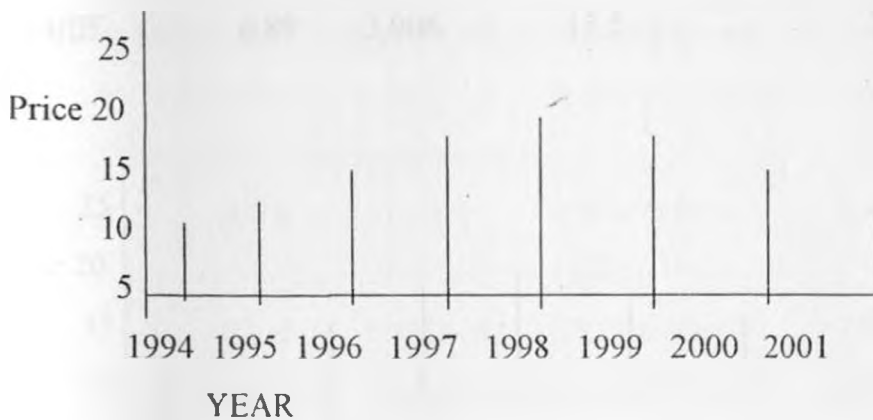
**3.4 Variation in Market Values**

This analysis is based on sales data obtained from valuers and Estate Agents in Nairobi. The data has been analysed by comparison of market values in Lavington and explanations provided by the valuers as well as the author's general knowledge of the estate. The data is attached to this report.

### 3.4.1 Variation of market values due to time

#### Location: Lavington Estate

L.R.No.	Size of Plot	Area of Main House	Price in Million of KShs.	Date
3734/aaa	1.0	2,300	10.0	1994
330/bbb	1.0	2,304	14.5	1995
3734/ccc	0.95	2,064	15.0	1996
3734/ddd	1.022	2,543	16.0	1997
3734/ddd	1.027	2,550	18.5	1998
209/eee	0.955	3,309	17.5	2000
3734/fff	0.89	3,906	13.5	2001



This shows that land values have kept on increasing with time in Lavington.

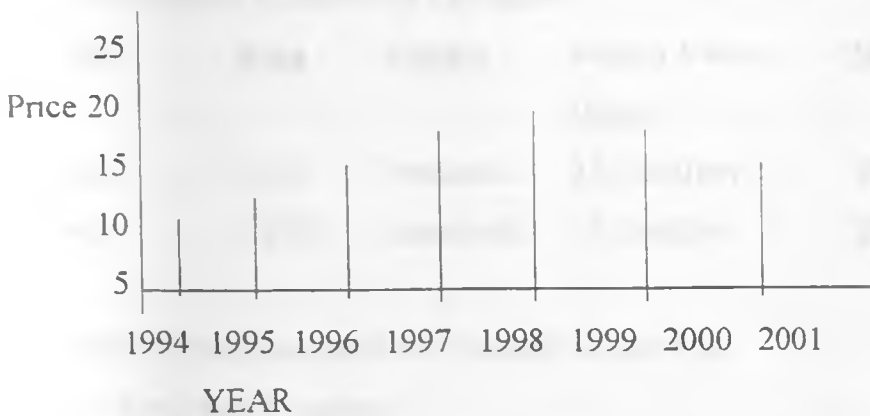
The graph shows a growth pattern of an average of 10% per annum between 1994 and 1998 and a drop of a similar average between 1999 and 2001.

Property values appreciate over time. Residential market values of year 1998 are higher than the residential land values four years ago. The

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The graph shows a growth pattern of an average of 10% per annum between 1994 and 1998 and a drop of a similar average between 1999 and 2001.

Property values appreciate over time. Residential market values of year 1998 are higher than the residential land values four years ago. The

growth pattern can also be calculated and a graph showing the trends in market values prepared as shown.

### 3.4.2. Tenure

There are generally two forms of private real estate ownership, freehold ownership and leasehold ownership. A freehold title conveys to a land owner ownership of land for an indefinite period of time. The landowner as a result has extensive powers of controlling and manipulating development on the land. A leasehold title to land on the other hand conveys to the landowner, exclusive occupation of land for a fixed or definite period of time (Appraisal Institute, 1998).

Ideally, land with a freehold title is more valuable than land with a leasehold title. Within the leasehold category, however, land values vary depending on the number of years remaining on the lease.

#### 3.4.2 (a) Freehold v Leasehold Lavington

<u>L.R. NO.</u>	<u>Area</u>	<u>Tenure</u>	Market Value (Kshs.)	<u>Date</u>
209/aaa	0.955	Freehold	13.5 million	2000
209/bbb	0.9726	Leasehold	12.5 million	2000

The effect of long leasehold and freehold is only 8%.

Source: Field data by author.

### 3.4.3 Location

Location is defined as “the time-distance, relationship or linkages between a property or neighbourhood and all other possible original and

destinations of people going to or coming from the property or neighbourhood” (Appraisal Institute, 1998).

An obvious rule in valuation of real estate is to be certain that the property being valued is the correct one. All the valuation reports perused had a sketch plan of the property and in particular showing the dimension of the plot. 10 samples out of the 20 samples or 50% of the reports inspected had a road map showing the location in relation to the accessibility from the Central Business District.

Location also refers to unconfirming users, which are generally avoided because of the different inconveniences associated with them. “It is not the mere presence of non-conforming use that reduces land value rather it is the externalities associated with the unconfirming use that have great impact on adjacent land values” (quoted from Holland, 1970 by Wameyo, 1992). Four types of non-conforming uses being particularly important to residential areas are city boundary, national parks, slum areas, river valleys and various forms of unkempt vacant land being used as hideouts for thieves and robbers.

### 3.4.3 Variations due to Location

#### Date of sample 1996

Location	L.R. No.	Area Acres	Market Price (KShs.)	Market Rent Per KShs. p.a.
Tende Drive	3734/aaa	0.957	18.5 million	1,080,000
Olunguruone Road	3734/bbb	1.022	16.0 million	1,020,000
Chalbi Drive	3734/ccc	1.24	8.0 million	720,000
Amboseli Lane	330/ddd	1.0	8.5 million	720,000



The variance between Tende Drive and Chalbi Drive both in Lavington but situated at different locations is 230%. Chalbi Drive is considered as an inferior location because it borders Kawangware slums and therefore insecure. Tende Drive is a preferred location in Lavington and therefore prices are highest.

#### 3.4.4. Variations due to size

There are two aspects of size considered in this study. Size of the plot in acres and size of the development in square feet. Related to this is the accommodation in terms of reception areas, bedrooms and bathrooms.

The attached schedule shows that there is a relationship between the size of main house accommodation and the market value. The smaller the size and subsequently the number of bedrooms, the lower the price. The difference between a three bedrooms house on 0.5 of an acre and a five bedrooms house on similar size of plot is 228%.

#### 3.4.6.Planning

Planning is considered as factor that affects the supply of residential properties. Supply can be increased through sub-division or redevelopment of the plot in accordance with the planning regulations. The factors considered are minimum plot sizes, plot coverage and plot ratio. These determine the amount of development that can take place on a particular plot. Ideally, a higher ground coverage and a higher plot ratio means more development and therefore more value.

Though this factor is emphasised in textbooks as a factor affecting value, (Syagga 1994, Lawrence, Rees & Britton, 1971 and Mackmin, 1994), it was not identified in the field as an important factor and was also not emphasised. A mention such as the plot has “potential for subdivision or redevelopment” but its effects were not reflected in the market values returned. Instances where planning is reflected, differences in market values are noted as explained below:

Four valuers were requested to prepare a valuation of a residential property for sale purposes and the valuations returned were as follows:

Valuer A	KShs.51.0 million	Mid 1995
Valuer B	KShs.300 million	September, 1995
Valuer C	KShs.285 million	October, 1995
Valuer D	KShs.150 million	December, 1995

Source: Filed data by author

Within a period of one year the property was valued at between KShs.51.0 million and KShs.300 million a difference of 588%. All the valuations were based on data and each of the valuers if called to justify the valuation would do so and quote market data that he relied on in the determination of the market value. To add to this confusion, the property changed hands on 2<sup>nd</sup> February 1996 at KShs.77.13 million and again on 8<sup>th</sup> February 1996 at KShs.174.5 million a difference of 250% within a period of six days. A search carried out on the neighbouring

plot at the Nairobi Land Registry indicated a registered sale price of KShs.102.968 million or KShs.22.10 million per acre on 17<sup>th</sup> December 1996 (Source Land Registry, Nairobi). A quotation from the local dailies on this property by an interested party stated “I am unable to confirm that the property was purchased at the best market values available” (Daily Nation September 1997).

An interview with the valuers concerned revealed the following:

Valuer A – Open Market value KShs.51.0 million

The basis of valuation was open market value for sale by a parastatal.

Valuer B – Open Market value KShs.300 million

The basis of valuation was open market value assuming a change of user to commercial.

Valuer C – Open Market value KShs.285 million.

The basis of valuation was similar to valuer B.

Valuer D - Open Market value KShs.150 million.

The basis of valuation was open market value on as is basis that is residential user.

**3.5. The methods of analysis of comparable data are explained hereunder**

**a) Unit cost analysis**

This is where the sale price is divided by the area of the main house to arrive at a unit cost per square foot. This unit cost was applied to the area of the subject property and a market value arrived at e.g.

Valuation of L.R. Number 209/8874/6

Area of main house - 1,604 square feet

Accommodation – 4 bedrooms 2 bathrooms

<u>Comparables adopted:</u> <u>L.R. Number</u>	<u>Area Main House</u>	<u>Sale Price KShs.</u>	<u>Date</u>	<u>Analysis Per Sq.ft.</u>
2/aaa	2,040	6.0 million	Nov. 1996	2,964
209/bbb	1877	6.2 million	Dec. 1996	3,306
209/ccc	1,745	6.4 million	Sept. 1996	3,667

The average of the three unit costs is applied to the valuation of the subject to arrive at the market value.

The average of the three unit costs is KShs.3,312.33 per sq.ft. x 1,604 square feet which is KShs.5.3 million.

The valuation returned as market value of the subject is KShs.5.2 million.

This method of analysis and subsequently of arriving at the market value was adopted in valuations of similar properties such as flats and town houses in the same location.

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#### b) Cost Analysis

This method is explained by Ngugi (1988) as involving the following steps:

(i) The valuer compares the property to be valued with similar properties. The elements of comparison are size of the building that is area and accommodation. Location of the property and the neighbourhood. The building structure regarding design the quality and the age as well as the shape of the building and the relationship of the market condition and climate of the past value and the current value.

(ii) The method has two parts:

a)The valuer compares the value of land with similar land sold there before.

b)He then compares the value of the buildings or development with the prices obtained in the past of similar developments.

In essence the valuer allocates the sale price of the property between the land and the developments. The prices obtained are unit cost per square foot of the area of the main house.

This confirms the point mentioned earlier that the valuation of residential properties is carried out using the Replacement Cost method and the value or capital cost arrived at is then compared with the market value of a similar property in the same location.

### 3.6 Regression Analysis

Since the hypothesis of this project is that unavailability, limited analysis and subsequent interpretation of data is the main cause of variations in market value of residential properties, the details which are obtained by valuers on comparable sales were subjected to a regression analysis in order to find out the contribution of each unit of comparison to market value of a residential property in the same location. In view of the fact that all the properties are situated in the same location, planning/zoning and services such as water electricity and drainage were not included as variables in the regression model. The variables, which were included, were: title, location, area of the plot, area of the main house, number of bedrooms, number of bathrooms, number of reception rooms, market rent and date of sale.

A total of 32 comparable sales were obtained from valuation and estate agents firms in Nairobi. A schedule of the properties is attached to this dissertation.

The results of the regression analysis were as follows:

#### Correlation coefficients of the variables

The correlation coefficient of the variables to market value were as follows:

Market Rent	0 .6517
Location	0 .5715
Area of main house	0.5235
Number of bathrooms	0.4721
Area of plot	0.4557

Number of reception rooms	0.3904
Number of bedrooms	0.2724
Title	-0.1700

The following variables were found to be highly correlated:

Rent is highly correlated to area of main house and number of bedrooms

Location is highly correlated to area of main house.

Area of main house is highly correlated to location and number of bedrooms. In view of the number of variables in the equation all the variables were entered in the equation using the stepwise method. The Market value was taken as the independent variable and the eight variables as the dependent variables. The result of the regression analysis using SPSS program were as follows

Regression Output

Multiple R	0.83695
R Square	0.70049
Adjusted R Square	0.59631
Standard Error	2643935.1480

Analysis of variance	DF	Sum of squares	Mean Square
	8	376020959462204.600	470026199332775.6
	23	160779040537795.500	6990393066860.67
F=	6.72389	Signif F	.0001

The T-Test, which indicates whether an individual coefficient is an important explanatory variable in the equation, is as follows

<u>Variable</u>	<u>T</u>	<u>Sig T</u>
Area of plot	3.699	0.0012
Market Rent	2.830	0.0095

Number of Bathrooms	1.741	0.0951
Number of Reception Rooms	-1.113	0.2772
Location	1.048	0.3054
Area of Main house	-0.660	0.5161
Title	-0.610	0.5480
Number of Bedrooms	0.022	0.9827

A similar regression analysis was carried out to determine the factors that affect the rent of residential properties in the same location. The result of the analysis were as follows

<u>Variable</u>	<u>T</u>	<u>Sig T</u>
Area of Main House	6.730	0.000
Location1	0.522	0.1388
Number of Bathrooms	1.203	0.2387
Number of Reception Rooms1	1.097	0.2817
Number of bedrooms	0.902	0.3746
Title	0.370	0.7141
Area of Plot	-0.184	0.8549

The regression output was as follows

Multiple R	0.77560
R Square	0.60155
Adjusted R Square	0.58827
Standard Error	145657.08817

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	960907879987.08000	960907879987.080
Residual	30	636479620012.92000	21215987333.7640
F= 45.29169	Signif F =.0000		



The result of the regression analysis as regards the significant factors that affect the value of residential properties in the same location are area of plot and rent. Rent on the other hand is affected by area of main house location and accommodation in terms of bathrooms bedrooms and reception areas.

## RECOMMENDATIONS

### CONSUMER BEHAVIOUR

The following are recommendations to the consumer as a result of the research conducted on the subject of consumer behaviour:

- Do not be deceived
  - Read the contract carefully
  - Title
  - Location (distance to roads, shops and commercial areas)
  - Service offered
  - Size of the
  - The amount of the price is very important and
  - read carefully the terms and conditions
  - Services such as water, electricity and sewage
  - The development is done according to the
  - requirements and standards
  - size of the development
- Some key points to consider in a contract are:
- The legal description of the property
  - A clear description of the property boundaries
  - A clear description of the property boundaries

## CHAPTER 4

### FINDINGS CONCLUSIONS AND RECOMMENDATIONS

#### 4.1 SUMMARY OF FINDINGS

1. The factors which are considered in the valuation of residential properties in order of preference are as follows:

- Date of the valuation
- Land Reference Number
- Title
- Location factors i.e. Estate, Road, and distance from central business district.
- Area of Plot
- Characteristics of the plot i.e. soils, shape, topography and road frontage, fencing and siteworks.
- Services such as water, electricity and drainage.
- The developments i.e. design construction details, accommodation and outbuildings.
- Area of the developments.

The factors that are considered not significant include: -

- Planning Regulation/Development potential
- Proximity to shopping, or other social amenities

- Date of inspection.

As regards non-property characteristics, the only significant factor considered is the state of the market.

## 2. Methods of Valuation

- a) All the three methods of valuations are adopted in the valuation of residential properties. However, in the valuation of up-market residential properties, the method most adopted is the cost approach.
- b) In determining the value of the property, the figure arrived at using the cost approach is compared with the comparable sales data obtained from within the organisation or from other valuers.
- c) The details obtained on the comparable sales data include the following:
  - Area of Plot
  - Area of Main house
  - Location
  - Date of sale
- d) The significant factors that affect market value of residential properties in the same location using multiple regression analysis are:
  - area of plot
  - rent.
- e) On the other the hand, the factors that affect the market rent of residential properties in the same location are as follows:
  - Area of main house

- Location
- Accommodation in terms of bathrooms, bedrooms and reception areas.

f) The effect of bathrooms on both market value and market rent is significant

The comparable sales obtained are mainly 5 and they are obtained from the records of the valuer or the organisation or from other valuers. It is also evident that valuers share data that could well be valuation figures of properties within the same location.

#### 4.2 Causes of variation in market value

It is evident that whichever method is adopted by the valuer the availability of comparable sales data is significant. Therefore, assuming that all values follow the valuation procedures, consider the same factors as outlined above, and adopt the same method then what brings about variations or differences in market value of residential properties in the same location: -

##### 1. The understanding of market value

It is evident that the market value arrived at by a valuer of up-market properties is actually capital value and not market value as the method adopted for market value based valuations is cost approach. Comparable sales data is only obtained to justify the figure arrived at using the cost approach. The comparable sales approach is therefore not used as a method. Syagga(2001) states that “if major adjustments for the sales comparison approach comes from the cost approach, sales comparison ceases to be an independent indicator of value”

The probability that a valuer would choose comparable sales, which would assist him, justify the valuation arrived at using the cost approach and not necessarily those that are indicators of market value are very high and thereby leading to variations or differences in market values.

3. It is evident from the research that comparable sales are available from valuation firms. However, these comparable sales could well be valuation figures arrived at using the cost approach and not actual sales. In addition these comparable sales are analysed using two methods which are cost related that is unit cost analysis or cost analysis as explained in chapter two.

4. It is evident that, since the valuers consider only one unit of comparison i.e area of main house or area of plot, other objective factors such as number of bathrooms and reception rooms and bedrooms are not considered. In addition, subjective comparative factors such architectural appeal, quality of finishes and fittings, quality of neighbourhood, security etc are not considered as significant comparison attributes.

5. The effect of market rent or rental value of residential properties is not considered, as a significant unit of comparison yet from the regression analysis rent is a significant contributor to the market value of residential properties. Subsequently large uneconomical houses valued with reference to area of main house alone would lead to variations in the market value. This factor is aggravated by the fact that estate agency is not considered as a significant department in valuation firms in Nairobi. Subjective attributes of value are captured during letting or

selling of residential properties and are analysed using hedonic pricing indices.

6. Other factors, which are ignored, include terms and conditions of sale and financing terms.

The terms and conditions of sale are important to identify any financial rebates that may have been considered in the sale. Such factors include sale to a related company, sale on a leaseback, sale by auction, sale to a neighbour who wishes to protect his property from say developers, a sale with a rebate for repairs or decoration etc., and a market price inclusive of fixtures such as generators, water pumps, storage tanks and elaborate security systems such as automatic gates, closed circuit, security systems etc.

Financial considerations would refer to market value based on a cash purchase of a residential property and one, which was subject to a loan or mortgage. Also market value based on sales of purchasers who, obtained a reduced mortgage rate and one who pays at full mortgage rate. All these factors though not significant affect market value.

7. Planning is considered as factor that affects the supply of residential properties. Supply can be increased through sub-division or redevelopment of the plot in accordance with the planning regulations. The factors considered are minimum plot sizes, plot coverage and plot ratio. These determine the amount of development that can take place on a particular plot. Ideally a higher ground coverage and a higher plot ratio means more development and therefore more value.

## 8. Political factors

In 1994 the media highlighted land deals by parastatals and instances were quoted in the media where a buyer purchased land at higher prices than the market valuation.

“The MP said that though the valuer had valued the plot at KShs.17.5 million, the National Social Security Fund bought it for KShs.30 million. Two other plots, were sold for KShs.76 million though the valuer had put their value at KShs.28 million”.

## 9. Social factors

These relate to where a party decides to sell the property to another person for social or ethnic or racial factors. “We have the so-called “Willing buyer, willing seller system.” However the time has come for government to abolish this willing buyer willing seller system, because if a Mr. Smith wanted another Mr. Smith to buy the same property, I am sure that the first Mr. Smith will sell his property to the other Mr. Smith, and this would just be a question of taking the property from your right hand and placing it on your left hand”. (Quoted from The Hansard by Yahya, 1980).

The buyers and sellers of residential properties also offer for sale of purchase residential properties at prices, which are above or below the market values of similar properties even where a valuation report is available. An example is a case where a reputable Valuation and Estate Agency firm carried out a valuation, for sale purposes, on a residential property in Muthaiga of KShs.30.0 million. The valuer recommended an asking price of KShs.32.5 million. Despite this the property was sold to a client by the owner at a price of KShs.40.0 million a difference of 33%

between the sale price and the market value. The reverse situation is also possible. An interview with the purchaser of the property revealed that the sale was based on personal considerations and not market value.

### **4.3 Conclusions and Recommendations**

Upmarket residential properties are not homogenous so no one property will be similar to the other. Therefore recommending a method of valuation to be adopted in the valuation of up-market properties would not be in order. There is however, evidence from the regression analysis model that there is a relationship between market value and market rent of built residential properties. So the preferred method of valuation of residential properties is the Income Approach or the Investment Method. However it is important to note that whichever method is used comparable sales data is required. So the emphasis of this dissertation is that more information/data on comparable sales be obtained. The sales data should be analysed using methods that consider all factors, both subjective as well as objective that affects the market of residential properties. These methods include paired data analysis and multiple regression analysis.

These methods of analysing data are known to reduce the differences in market values to below 15%.

These methods depend on availability of sales data. It is evident that various valuation firms have data bank of sales data. If all the data available were centralised and available to other valuers and also researchers then the use of modern methods of analysing data would be feasible.

Valuers also require training in these methods of analysis. This can be done through Continuous Professional Development (CPD). These methods and their applications can be explained and discussed.



The institution of surveyors of Kenya require to come up with valuation guidelines which emphasise the basis of valuation that are suitable for market based valuations of residential properties. In the United Kingdom valuation of residential properties is carried out using the Investment Approach. In Canada valuation of residential properties is carried out using the Comparative and Investment Approaches. It is therefore possible to have guidelines on the applicable methods of valuation for up-market residential properties.

#### **4.4 Test of Hypothesis:**

The hypothesis of this dissertation is that unavailability of sales data, limited analysis and subsequent interpretation of the sales data is the main cause of variations or differences in market value of residential properties. This hypothesis is difficult to prove mathematically as the final valuation figure is an opinion of valuer. At the same time every valuer would, at any one time, be able to justify the valuation figure. However the courts have proofed valuers wrong or negligent as follows:

##### **1. Nel v Lubbe 1999 (3) SA 109(W)**

A valuer's figure was criticised by Justice Laveson for not explaining why the expected forced sale value was R 290,000. With such reasoning the court would then have been placed in possession of information that would have enabled it to reach its own conclusion. The information that would be important would include the prices paid for similar properties in the same area on forced sales basis at about the

same time. This case emphasises availability of sales data related to the valuation problem

Source: South African Institute of Valuers, The Valuer 2000.

### 2. Banque Bruxelles Lambert SA V Eagle Star Insurance Co. Ltd. 1994

The valuer was negligent in failing to take into account in the valuation the price at which the property had just been purchased.

This case emphasises the choice of sales data. Many valuers in Nairobi ignore sale prices of the subject valuation on the basis that “the price paid was too high” without thorough analysis of the sale price.

Source: Institute of Surveyors of Kenya The Kenya Surveyor Vol.8 No.2.

### 3. Coris and Case (Gibsons.J )Case No 8243 EG212 1977

In this instance the valuer failed to collect sufficient information to enable him prepare a soundly based valuation. He did not inspect the site and also failed to make enquiries of the local planning authorities about future development of the land. He also ignored without justification a colleague’s earlier and thorough appraisal of the development potential of the land.

This case emphasises the importance of planning which is not considered as a significant factor in the valuation of residential properties.

Source: Institution of Surveyors of Kenya. The Kenya Surveyor March, April 1991.

#### **4.5 Areas of further Research**

This research has confirmed that there is need to standardise the valuation process and in particular the methods of valuation, availability and methods of analysis of sales data. The research has also confirmed the significance of market rent as a unit of comparison of sales data.

Further research would be on valuation guidelines and standards adopted in other countries and how these guidelines and standards can be adopted in Kenya for use by valuers of all categories of properties.

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	plotno	location	title	areaplot	areamh	design	nobed	nobatlr
1	330/1	good	freehold	1.50	2985.00	single stor	4	2
2	330/2	good	freehold	1.00	1750.00	single stor	4	2
3	330/3	fair	freehold	1.00	1935.00	single stor	4	2
4	330/4	fair	freehold	1.00	1825.00	single stor	3	2
5	330/5	good	freehold	1.00	1575.00	single stor	3	1
6	330/6	good	freehold	.75	1750.00	double sto	4	2
7	330/7	good	freehold	1.50	1850.00	single stor	4	2
8	330/8	good	freehold	1.00	1985.00	single stor	4	2
9	330/9	good	freehold	1.50	2155.00	single stor	3	2
10	330/10	good	freehold	1.00	2065.00	single stor	4	2
11	3734/1	best	freehold	1.00	2545.00	double sto	5	2
12	3734/2	best	freehold	1.00	4000.00	single stor	4	4
13	3734/3	fair	freehold	1.00	1650.00	single stor	4	2
14	3734/4	good	freehold	.75	1250.00	single stor	3	1
15	3734/5	best	freehold	1.00	1900.00	double sto	3	3
16	3734/6	best	freehold	1.00	2315.00	double sto	4	2
17	3734/7	best	freehold	.75	4185.00	double sto	6	4
18	3734/8	fair	freehold	.50	1200.00	single stor	3	2
19	3734/9	best	freehold	1.00	1965.00	single stor	4	2

Comparable Sales of Residential Properties in Lavington  
Source: Field Data by Author.

norecept	outhouse	rent	value	date
2	available	960000.0	22000000	1996
2	available	780000.0	12750000	1996
2	available	780000.0	10200000	1997
2	available	720000.0	8500000	1996
1	not availab	600000.0	13000000	1996
2	available	660000.0	13000000	1996
2	available	720000.0	20000000	1996
2	available	720000.0	14500000	1996
2	available	600000.0	15000000	2001
2	available	780000.0	15000000	1996
2	available	1020000	16000000	1997
4	available	1440000	22000000	1998
2	available	540000.0	9000000	1997
1	available	540000.0	11500000	1996
3	not availab	600000.0	12800000	1996
2	available	780000.0	13000000	1999
4	available	900000.0	17000000	1999
2	available	540000.0	8250000	1997
2	available	900000.0	15000000	1996

and Riverside Drive

	plotno	location	title	areaplot	areamh	design
20	3734/1	fair	freehold	1.25	1700.00	single stor
21	3734/1	best	freehold	1.20	4340.00	single stor
22	3734/1	good	freehold	1.00	3906.00	single stor
23	3734/1	best	freehold	1.00	2025.00	single stor
24	3734/1	best	freehold	1.00	4115.00	double sto
25	3734/1	best	leasehold	1.00	2760.00	double sto
26	209/1	best	leasehold	.75	2610.00	single stor
27	209/2	best	leasehold	1.50	1700.00	single stor
28	205/1	best	leasehold	1.50	2575.00	double sto
29	205/2	best	leasehold	1.00	3500.00	double sto
30	205/3	best	leasehold	1.00	3310.00	double sto
31	205/4	good	leasehold	1.50	2460.00	single stor
32	205/5	fair	leasehold	.50	2500.00	single stor
33		.	.	.	.	.
34		.	.	.	.	.

Comparable Sales of Residential Properties  
Source: Field Data by Author.

nobed	nobathr	norecept	outhouse	rent	value	date
4	1	2	available	600000.0	8000000	2001
5	4	3	available	1200000	19000000	2001
3	2	3	available	900000.0	10500000	2001
4	2	2	available	600000.0	8750000	2001
5	4	4	available	1200000	20000000	2001
4	3	2	available	780000.0	12500000	2001
4	3	3	available	1200000	20000000	1999
3	1	2	available	780000.0	16200000	2001
3	2	2	available	600000.0	19750000	2001
4	2	2	available	1020000	14500000	2001
5	3	4	available	960000.0	13500000	2001
3	2	2	available	720000.0	18000000	1996
4	2	2	available	600000.0	10000000	2001
.	.	.	.	.	.	.
.	.	.	.	.	.	.

in Lavington and Riverside Drive



PARTICULARS FOR A RESIDENTIAL PROPERTY FOR SALE

L.R. Number: 195/XXX.

Area: 4.8 acres.

Tenure: Freehold.

General Main House with separate garaging, stores and quarters.

Remarks: Main House

(Stone & asbestos panels under a roof of corrugated asbestors).

Entry verandah; Living room with dining area; Good sized kitchen: (1)

Double bedroom with ensuite bathroom (2) Double bedroom:

Cloakroom with W.C. & basin; Study recess: (3) Single bedroom:

bathroom (4) Double bedroom.

Garage

Double lock-up garage with two stores.

Servants Quarters

Three rooms with the usual offices.

Water Storage

Elevated tank of 4,000 litres. Pleasant treed red soil site with gentle slope. Provisional approval for subdivision has been obtained.

Price Guide: KShs.15.5 million.

Source: Field data by author.

## SALES PARTICULARS OF A RESIDENTIAL PROPERTY FOR SALE

R. Number: 3734/XXX.

Situation: On Muhoya Avenue in Lavington and close to Jaffrey's Club.

Tenure: Freehold.

Area: 1.021 acres approximately.

Occupancy: Currently vacant.

General Description: The development comprises a prime redevelopment property with the conventional THREE BEDROOMED solid bungalow, having One BATHROOM and W.C., LOUNGE with fireplace; DINING RECESS; GARAGE and self-contained SERVANTS QUARTER for TWO. The plot is large and has the potential for sub-division into two half-acre plots.

Price Guide: KShs. 14 Million.

Source: Field data by author.

Field Analysis: Assume a fair open market rent of KShs.60,000/- per month  
(KShs.720,000) per annum)

1. Yield 5.76% on whole plot

YP 17.36 – very high!

2. On 0.5226 acres

Yield 9.6%

YP 10.42

Remarks: The situation is popular. The plot is large @ 1.0 acre and mains sewer is next door. The plot has considerable redevelopment/further development potential.

Date: 7<sup>th</sup> June, 2001

Source: Field data by author.

## SALES ANALYSIS OF A RESIDENTIAL PROPERTY

L.R. Number: 209/XXX, Muhoya Avenue, Lavington.

Plot/Title: 0.9726 acres, leasehold for 99 years from 1<sup>st</sup> October, 1969.

Services: Mains electricity and water connected. Drainage to a septic tank. but mains sewer is available.

Improvements: An extended 4 bedrooms. 2 bathrooms. 1 showerroom bungalow (2760 sq.ft.) with a garage (210 sq.ft.). SQ.(320 sq.ft.). Total built-up area is 3,290 sq.ft.

Sales/Valuation Lloyd Masika Open Market Valuation

Analysis: KShs.15.0 million 31/3/1999

Sale Price (by private treaty)

KShs.12.5 million May, 2001

Information provided by the Credit Manager, NIC Bank, who sold the property.

### Analysis on sale:

Say Developments on 0.5226 acres

Analysis: KShs.3,799/- per sq.ft.

Extra land: 0.45 acres

Say developments + 0.5226 acres KShs. 7.5 million

Extra 0.45 KShs. 5.0 million

Total KShs.12.5 million

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# CHARACTERISTICS OF RESIDENTIAL PROPERTIES

Source: Institutional of Surveyors of Kenya (ISK)

## Property details

L.R. Number:

Location: Estate  
Street

Title: Freehold  
Leasehold over 50 years  
Leasehold under 50 years

Area: Acres  
Hactres

USV: KShs.

Planning Zone:

Services: Water  
Electricity  
Sewer  
Telephone  
Others

The Plot:                    Shape  
                                  Soil                    Red  
  Murrum  
  Black Cotton  
                                  Topography level  
  Sloppy  
  Steep

Garden Developed  
Not Developed

Improvements:            Double storey  
                                  Single Storey

Accommodation:        No. of bedrooms  
                                  No. of bathrooms

Outbuildings:            Garage  
                                  Servants quarters

Areas (Sq.ft.):                    Main House  
  Garage  
  Servants quarters  
  Others

Remarks (specify):

Market Value:                      KShs.

Market details

Any statement on the market

Method of valuation

Replacement cost

Comparable

Investment

Comparable sales

No of sales data

Source

Location

5. Method of analysis

    Analysis per sq. ft.

    Cost analysis

    Paired data

    Adjustment

    Regression analysis

## Questionnaire Administered to Valuers

### A Review of the Sales Comparative Approach as Applied to Valuation of high income residential neighbourhoods in Nairobi.

#### Details of Valuer

##### Qualification

	Yes	No
MISK	<input type="checkbox"/>	<input type="checkbox"/>
RV	<input type="checkbox"/>	<input type="checkbox"/>
Estate Agent	<input type="checkbox"/>	<input type="checkbox"/>

Others/Specify)-----

##### Years of Practice

##### Valuation Practice

###### (a) Nature of Business

- Valuation
- Valuation & Estate Agency
- Valuation of Estate Agency & Management
- All

Others (Specify) -----



Categories of Valuations carried out

- Rural
- Urban
- Institutional
- All

If urban State valuations most carried out

- Residential
- Industrial
- Commercial
- All

(d) State percentage of residential valuations carried out  
in relation to total valuations carried out by your firm -----

Types of valuations

- Bank
- Mortgage
- Auction
- Asset valuation
- Investments

(f) State percentage of bank valuations  
in relation to other valuations -----

Methods of Valuation applied

Methods adopted for residential properties

Comparison approach

Cost approach

Investment approach

State reasons for adopting comparison approach

State sources of sales data/comparables in order of preference

From within

Other valuers

Estate Agents

Buyers

Sellers

Lands Office

Others (specify) -----

Specify what details you obtain on the comparables.

Property details-----

Sale price-----

Market price-----

Others (specify) -----

How many comparables do you obtain in a valuation instruction.

Above 10

5 - 9

Under 5

What method of analysis do you adopt

Unit cost

Cost analysis

Paired data analysis

Regression analysis

Graphic analysis

Others (specify)-----

How do you determine the market value

Average

Rule of Thumb

Others (specify) -----

Storage of Data

Yes No

Do you have a data base for comparable sales/sales data

How is the data stored

Manually

Computers

Others (specify)-----

Is data available to:

Yes No

Other valuers

Researchers

Public

UNIVERSITY OF NAIROBI  
4112

(d) Do you have valuation guidance notes

Yes No

Do produce property market reports

Yes No

(f) Provide any other information not covered above.