An Empirical Investigation of non-economic Motives of Housing allocation in Residential Areas of Nairobi

By

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B.A. Land Economics (Hons.) Nairobi, 1986

A Thesis submitted in partial fulfilment
for the degree of Master of Arts in
Housing Administration in the Department
Of Land Development at the University of Nairobi.

MARCH 1991

DECLARATION

I, LUCY W. NJENGA, hereby declare that this thesis is my original work and has not been presented for a degree in any other University.

Signed

DECLARATION OF SUPERVISOR

This thesis has been submitted for examination with my approval as University Supervisor.

Prof. G.K. King'oriah

ACKNOWLEDGEMENTS

This study was made possible by the generous scholarship awarded to me by the University of Nairobi to whom I am very grateful.

I take this opportunity to thank members of staff of the Department of Land Development for the guidance which was always readily given whenever I sought it. Very special thanks are due to my Supervisor Prof. G.K. King'oriah for his valuable guidance and encouragement during the entire period of this study, of particular significance is the expediency with which he handled my script whenever given to him, this invaluable assistance is greatly appreciated.

I would like to thank my second supervisor Mr. W.H.A. Olima for the assistance he gave me for the short period he was around during this study.

Many people have assisted in various ways towards the completion of this work. It is impossible to mention all of them. I am grateful to those friends who showed interest in my work and to those who assisted in one way or other during collection of data. I am also thankful to the residents of the areas I studied for their co-operation.

I thank my family, and in particular my parents for their worthy investment in my education as well as the faith they have had in my ability. Special thanks to my husband E. K. Maruti for the support and encouragement he has given me during the entire course of this study and with him, my daughter Ida and son Jesse whom I have frequently stayed away from while working on this thesis.

Last but not least, many thanks to Isabel Kihumba and Victoria Kamau for their patience while typing this work.

DEDICATION

This study is dedicated to my dear parents Timan Njenga Gicharu and Mary Wanjiru Njenga for their great encouragement.

ABSTRACT

In most urban areas, residential land use takes up the highest proportion of land. The residential accommodation comprises flats, detached and semi-detached houses on differing sizes of land. The heterogeneity of this accommodation reflects not only decisions taken by households at some time but also diversity in income, family structure, tastes and preferences as well as other socio-economic characteristics of households.

Sociologists and city planners have used an economic theory to contribute to the theory of residential location which depends on the assumption that as the population of a city grew and the housing stock increased, the newest dwellings would always be occupied by the high income groups and that as the dwellings aged, they would filter down through the population, becoming cheaper and cheaper and being occupied successively by households of lower and lower incomes. The pattern of location of households with differing incomes would be determined by the pattern of growth of the city in the past. Many of these theories have concentrated upon institutional

analysis to the exclusion of the individual actor. This study wishes to analyse the individual aspects of residential mobility and preferences in the process of residential location. The fact that residential accommodation in different parts of Nairobi is heterogeneous reflects not only that decisions are made with reference to choice of accommodation by each household but also differences in income, capital accumulation, family structure etc. of these households.

In making residential choices, households do not make decisions in a vacuum, rather the preferences that they express and the constraints that they experience are moulded by the nature of the wider social structure and by the immediate effects of the specific character of certain systems of housing production and allocation. This study sets out to examine the factors responsible for the current pattern of residential locations in Nairobi, more specifically, to analyse the factors that households consider in locating in a certain area and in a particular house. This is therefore a study on residential location based upon the survey, evaluation and comparison of eleven (11) localities selected from the metropolitan area of Nairobi, Kenya. These localities represent the full range of residential

developments of Nairobi, planned and unplanned neighbourhoods, lowest to highest densities and lowest to highest incomes.

The results from the eleven residential areas studied have revealed that although people of all socio-economic levels aspire to good quality housing with complementary facilities most people want a satisfactory physical and social environment, however, the degree to which this desire is satisfied is strongly related to the socio-economic stage that each house has reached. This study contends, that the socio-economic status of a household influences the choice of residential location. While lower income households tend to make developed residential location decisions which are influenced by such basic aspects as space, rent and distance to work, higher income households have more 'luxurious' factors such as neighbourhood and better house designs.

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Definition of Terms

Family : In this study, family refers to the composition of parent/s and children, it excludes other relatives and domestic workers even though they may share the same housing unit.

Flat : A self contained dwelling unit joined to others within a single structure.

Household : The term household has several definitions. The house dwelling concept defines household as the number of persons occupying one housing unit. The Central Bureau of statistics uses the term household to refer to a person or group of persons generally bound by ties of kinship who normaslly reside together under a single roof or several roofs within a single compound and who share a community of life in that they are snswerable to some head and have a common source of food. In this study, the term household is to refer to a person or group of persons related or not, living in the same housing unit.

Housing Allocation Vs Housing Location : The major difference between the two terms is that while allocation is market related, location is geographical. The operations of the housing market differentiate households into separate housing markets, then a residential structure evolves whereby there is spatial segregation of the various types of dwellings and neighbourhoods. it is, therefore, taken that each household, due to its

socio-economic characteristics has been allocated a residential market from which it chooses where to locate. Hence while allocation does not involve the participation of the household, location is a choice made by each household, that is, where to live vis a vis place of work, schools, health and recreational facilities etc. All the socio-economic characteristics will come into play in making of the decision of where to live.

Maisonnette : A semi - detached or terraced self-contained dwelling unit with more than one floor.

Neighbourhood : This is a spatial unit which incorporates socio-cultural, educational, health, recreational and commercial requirements of the people. The physical standards of a neighbourhood refects the particular needs of these requirements of the community.

Non-economic : This term is interchangeable with social characteristics and objectives of individuals and refers to those characteristics which are not income or financial related. Hence non-economic factors would include family size and composition, education and attitudes. The exclude incomes, prices and monetary values.

Residential Mobility : Mobility is the change of movement in response to a new stimulus or situation. It

involves change, new experience and stimulation. Residential mobility is, therefore, the fluidity of society in both geographical and social terms whithin residential areas.

Room : An enclosed area, either detached or semi detached used to serve all purposes of a single residential unit, i.e. the same room is being used as living space, dining space, cooking space, had space etc. with the toilet and bathroom being either part of the space or outside i.e. detached.

Socio-economic : The social and/or economic characteristics and objectives of individuals. Although occupation, education and income are often used interchangeably as measures of socio-economic status, other indicators of socio-economic status one household size and composition, family situation, spending priorities and attitudes.

CHAPTER ONE

Problem Identification

Conventional land economic theories amongst others, assert that the distance from the Central Business District (CBD) of an urban area is one of the most important factors in any explanation of the residential location patterns of households. This implies amongst other implications that urban households will locate themselves taking into account the distance from the CBD. There is therefore, theoretically, a relationship between the place one stays in and the distance to the CBD.

In Nairobi in the recent past, it has been the norm for residential densities to increase as the city centre is approached. This has been the result of residential densities increasing as the position of greatest accessibility is approached.

However, Nairobi is currently experiencing easing of residential densities from near the Central Business District (CBD) to the peri-urban areas. This could mean that either accessibility has ceased to be the most important factor in making decisions with respect to residential location, or with increased mobility of families, proximity to CBD is no longer of utmost importance in residential location decisions. In other words, although the natural tendency has hitherto been for the employed people to minimise their movement, this has partially been offset by opposing forces affecting

the choice of residential location. It is a contention of this study that the rapid movement from residential locations close to the CBD which provides employment places, shelter, shopping, medical and educational facilities cannot wholly be attributed to advances in transportation in view of the fact that there has been relatively slow advances in the structures of transportation technology. It is therefore, a concern of this study to analyse residential mobility through the study of residential histories with a view to determining what aspects of residential preferences are important to different types of households.

Although Kenya faces severe difficulties in trying to fulfill social and economic aspects of shelter, these difficulties are made even more severe by improper planning whereby houses have been taken over by households other than those for whom they were earmarked. This study intends to examine whether there are any housing preferences or aspects that are peculiar to certain household types. This way these aspects can in so far as is practical be incorporated or considered while planning housing units for these household groups.

Hypothesis

It is hypothesized in this study that other factors in the social and economic dimension than distance to work and power to afford housing play an important role in the choice of residential area in Nairobi.

Study Objectives

The main objective of this study is to identify the factors that influence residential location decisions in households of different socio-economic status in Nairobi. The study therefore attempts to evaluate all the factors that households consider in their housing choices as well as the importance accorded to each of these factors by every household studied. By analysing basic models of land use patterns within urban areas, the study aims to establish whether there exists any similarities between these theories and Nairobi's residential patterns.

The Study Area

Nairobi the capital of Kenya lies at the border between two different types of ecological regions in Central Kenya. To the south stretch the lowly populated plains of the Athi and Kapiti and to the north the highly populated highlands of Kenya. Both are bounded to the west by the Rift Valley. It lies along the main Kenya highway and railway from Mombasa to Kisumu which proceeds westwards to serve Uganda and other countries.

Nairobi has experienced a more rapid growth both in population and economic terms than any other urban area in Kenya since it was founded by the Imperial British East African Company (IBEA) in 1895. In 1901 the population was

8,000 and by 1948, it was 118,976. In 1962 the population was 343,500 and by 1979, it has risen to 827,800. In 1988, population in Nairobi was estimated to be 1,230,200[1].

Nairobi is, therefore, the largest city in the country and takes the largest share in most of the economic sectors. About 40% of the country's modern sector jobs and 45% of incomes from this sector are in Nairobi[2].

Owing to the size and high rate of population growth, Nairobi experiences the most acute magnitude of the urban housing problem in Kenya. In addition, Nairobi has the largest squatter and slum settlements in urban Kenya with 30% of the population living in substandard housing[3]. All these factors contributed in making Nairobi an ideal study area.

Organisation of Study

The first section of this study comprises the introductory chapter which sets out the problem statement, study objectives, the study hypothesis, the scope, significance and methodology of the study. The second section consists of chapters two and three. Chapter two reviews the three basic models that were proposed by economists and geographers as theories of land use patterns within urban area. These theories are, the concentric zone theory developed by E. W. Burgess in the 1920's, the radial

sector theory developed by H. Hoyt in the 1930's and thirdly, the multiple nuclei theory developed by C.D. Harris and E.C. Ullman in the 1940's.

This study attempts to establish, later, whether any Nairobi's residential patterns conform to these theories. This chapter also briefly reviews sociological aspects influencing residential patterns in urban areas. It also briefly reviews the historical development of Nairobi's residential pattern which may or not be influencing the current residential location trends.

Chapter 3 of the study analyses the urban housing market. In addition, it contains a brief analysis of the housing situation in Nairobi. Chapter 4 constitutes the core of the study in which data obtained from the field survey is analysed and finally Chapter 5 deals with conclusions and recomendations.

Scope of Study

This paper reports data on housing and housing preferences gathered in a survey of households living in Lavington, Kilimani, Parklands, Eastleigh, Buruburu, Umoja, Otiende, Kibera, Plainsview, Riruta Satellite and Kawangware residential areas in Nairobi. First, background on the houses and tenure types are given. Secondly, sociological and economic characteristic of respondent households is summarised.

Their previous and present houses are analysed in terms of the aim of establishing what factors are important in housing location and preference decisions with respect to households of different socio-economic status. Besides the data analysis, this study has attempted an analysis of land use patterns within urban areas with a view to establish any relationship that might exist between these theories and the current Nairobi's residential pattern. The study also reviews the urban housing market. In the final chapter, the study draws its conclusions and recommendations.

Research Methodology

The study began by collection of secondary data. This entailed reviewing literature related to residential location issues. The researcher began by analysing literature on historical development of residential patterns in Nairobi as well as having an insight at the urban housing market. By so doing, the researcher hoped to find from the said literature the relationship that might exist between historical developments of residential patterns in Nairobi and the current residential location patterns, also the contribution of the urban housing market to the current residential location pattern.

Literature related to conventional theories of residential location such as those by Burgess, Hoyt and others were reviewed, by so doing the researcher hoped to

detect any similarities or otherwise that might exist between these conventional theories and the actual pattern that exists in the study area. The sources of this secondary data included University libraries, public libraries, journals, magazines and any other sources from which relevant data could be obtained.

The second part involved collection of primary data from the case studies. The researcher utilised questionnaires which were administered to residents of selected residential areas. The purpose of administering questionnaires was to speed up data collection because in cases where the respondent would be absent, the questionnaire would be left and collected later when the respondent would have completed it. Some of the respondents were also uncooperative and would choose to fill in the questionnaires at their own time instead of being interviewed by the researcher. However, where the respondent was not literate enough to fill in the questionnaire by him/her self, the researcher would interview them and fill in the answers. This was found more convenient than having to write down all the answers separately. Questionnaires made analysis of the data easier. The selected residential areas cover households of diverse social and economic characteristics. The data obtained has been presented in form of tables and written text.

Sampling

Areas sampling was carried out by using administrative/ political boundary maps as sampling frames. The City of Nairobi was divided into zones out of which sub-samples (estates) were taken. The sub-samples were defined and grouped into strata representing the different neighbourhoods of each zone. These zones were:-

1. Upper Nairobi Zone:

This zone included such estates as Upper Hill, Kileleshwa, Kilimani, Lavington, Bernhard, Thompson, Loresho, and Woodley Estates.

2. Parklands Zone:

This includes Parklands, Muthaiga and Westlands areas.

Both these zones cover an area that is characterised by low densities and are prestigious suburbs. They have minimum plot sizes ranging from half acre to one acre and ground coverage of $33\frac{1}{3}\%$.

3. Eastleigh/Pangani Zone:

This includes estates such as Kariokor, Ziwani, Starehe, Pumwani, Bondeni and Bahati (Heshima). These are mainly low income high density areas close to the city centre. They have a minimum plot size ranging between $\frac{1}{5}$ of an acre to

$\frac{1}{10}$ of an acre and ground coverage ranges between $33\frac{1}{3}$ to 50%.

4. Eastleigh Zone:

Includes Buruburu, Bahati, Jericho, Kimathi, Makadara, Umoja, Makongeni, Kaloleni and Shauri Moyo estates. These are low to middle income housing estates covering high density areas. Minimum plot size is $\frac{1}{20}$ of an acre and ground coverage of 50%.

5. Nairobi South Zone:

Includes Southlands, Rubia, Ngei, Otiende, Maasai, Jambo, Kibera, Ngumo, Highview, Magiwa estates and the Karen and Langata areas.

This zone has a cross-section of households ranging from the very low income households of the densely populated Kibera slum area to the middle income but high density estates i.e. Magiwa, Ngumo etc. and through to the high income low density area of Karen-Langata which has minimum plot size of five (5) acres compared to the $\frac{1}{10}$ of an acre of the other areas.

6. Dagoretti Zone:

This zone covers the 'semi-rural' areas of the Dagoretti Constitutency which includes such areas as Dagoretti Corner, Riruta Satellite, Waithaka, Kawangware

and Mutu-ini areas that border Kiambu District. The area has a mixture of rural and urban developments and has high to medium densities.

The aim of the field study was to collect information from a sample representative of the diverse socio-economic characteristics of Nairobi residents. A pilot study was therefore conducted to obtain information on the kind of population to be studied, reactions to questions and expected answers. This was done by way of sending out questionnaires and also personal interviews.

The aim of the pilot survey was that while the entire population was so large and dispersed ruling out complete coverage due to shortage of both time and money, it was also crucial that the different strata in the population, that is, varied family sizes, ages, income, education etc. were adequately represented in the sample. Stratified random sampling was employed and the selection with strata was made randomly.

For each of the zones, pieces of paper containing names of each and every estate making up the zone were folded and put in a basket, after shaking them up, two pieces of paper each bearing the name of an estate were picked at random. This exercise, was repeated for each of the six zones such that at the end of the exercise, the researcher was left with one or two estates from each zone depending on

the size of the zone. These estates were:

Upper Nairobi Zone: Lavington and Kilimani estates

Parklands Zone: Lower Parklands and Upper Parklands

Eastleigh/Pangani Zone: Eastleigh and Pangani

Eastlands Zone: Buruburu and Umoja Estates

Langata Zone: Plainsview, Kibera and Otiende Estates

Dagoretti Zone: Riruta Satellite and Kawangware.

Having determined the case studies, random sampling method was again utilised to pick the households to be studied, where plot numbers were available like Parklands, Westlands, Lavington and Kilimani, for each one of these estates, all plot numbers were again written on small pieces of paper, folded, put in a basket and shaken after which 20 to 30 plot numbers were picked depending on the size of the study area.

In estates where numbering or lettering is used, e.g. Buruburu, Umoja, Mariakani, Plainsview and Otiende Estates, the same sampling procedure was utilized but using the house numbers to obtain households to be studied. Sample size of 20 were picked for areas that had either low densities or where the study area though having high density was small. Sample sizes of 25 - 30 were picked for study areas that were either large in size or those which though small had high densities.

Through study of previous surveys dealing with the same population, it was established that there was a relationship between areas lived, education levels, incomes and family sizes such that families with higher education levels lived in better neighbourhoods, had higher incomes and had smaller family sizes. Households living in the same estates were shown to have relatively smaller levels of variability compared to inter-estates households. This was established through the pilot survey. This small degree of variability made it easier to ensure adequate representation of an estate by a small sample which had to be kept small due to time and resources. Indeed, the study showed that response to questions put to households of similar socio-economic status within the same estate was similar. The pilot survey made it possible to ascertain the kind of families/households in each area. This was also ascertained through perusal of previous studies carried out in different residential areas in Nairobi. These two factors made it possible to ensure adequate representation of the sample to the cross-section of Nairobi residents because it was possible to pick estates of the entire socio-economic cross-section.

Geographical factors were not considered in the study. While the size of Nairobi is not large enough to occasion major geographical differences in the residential areas, it was assumed that any geographical factor that may have influenced residential location would be given when

respondents gave reasons regarding mobility. In addition the major geographical factors, that is, soil types, topography and climate are assimilated in allocation. Areas with red coffee soils which is better than black cotton soils have higher land values hence housing development is carried out for higher income households. The areas with better topography and are cooler also experience development of expensive neighbourhoods for high income households. The pilot survey also showed that households hardly ever considered geographical factors in residential location. This is possibly due to the above mentioned factors which make geographic factors issues of allocation.

Constraints

There were constraints that were encountered in the research design, sampling and operations in the field. These were:-

i) Although some factors for stratification were chosen because they seemed relevant to most questions, it had to be decided which questions to give priority and select stratification factors to suit them. This was to some minor extent manipulation of the samples.

ii) The study was not confined to a single purpose. It sought information on several variables and a sample that may be big enough for one variable could have been inadequate for another. This like in the above case necessitated prioritisation.

iii) Income related questions were touchy. respondents feared that knowledge of their income may lead to income tax problems. This constraint was reasonably but not absolutely overcome by assuring respondents that the information given would neither appear separately but would be grouped with others nor was there any possibility of the information being divulged to Income Tax Department.

On the whole respondents had to be assured that the information they gave would be kept secret and would only be used for a thesis and that their names would not appear in the thesis.

iv) Some respondents of lower socio-economic characteristics attempted to give the impression that they were better off than the interviewer thought. They therefore gave some incorrect answers especially regarding their incomes and education levels. The interviewer had at times to make intelligent guesses based on observations from the household.

There were also communication problems with these households and sometimes the questions had to be translated into Kiwahili which may have slightly altered the meaning, hence incorrect responses.

v) Most of the interviewing had to be conducted personally to minimize the rate of non-response and also to solicit answers for 'touchy' questions. This was both expensive and time consuming.

FOOTNOTES

1. Republic of Kenya, "Human Settlement in Kenya"; A Strategy for Urban and Rural Development, 1978 Ed. (Nairobi: Physical Planning Dept., Ministry of Lands and Settlement, 1978), P. 26.

2. Ministry of Finance and Planning, Economics Survey, 1984, Nairobi Government Printer, 1984, P. 56.

3. "Nairobi Urban Study Group": Nairobi Metropolitan Growth Strategy, Nairobi, City Council of Nairobi, Vol. PN 5.33 and 5.38.

CHAPTER TWO

THEORIES OF RESIDENTIAL LOCATION

Introduction

In their attempts to study the location of various activities within urban areas, economists and geographers have come up with three basic models describing the theory of land use pattern within urban areas. Namely, these theories are: the Concentric Zone Theory developed by E. W. Burgess in the early 1920's; the Radial Sector Theory developed by H. Hoyt in the 1930's; and the Multiple Nuclei Theory developed by C.D. Harris and E.C. Ullman in the 1940's. All these theories have been based on the assumption that activities tend to concentrate in areas of greatest accessibility.

This chapter reviews these theories with the objective of establishing, at a later stage, whether or not there is any relationship between the mode of residential patterns in Nairobi and these theories, i.e. establishing whether Nairobi's residential patterns conform to these theories. In addition the Chapter looks at sociological aspects influencing residential patterns in urban areas.

The second part of this Chapter reviews the historical development of Nairobi's residential pattern with the aim of establishing to what extent the city's historical development may have or still is influencing the current residential location trends.

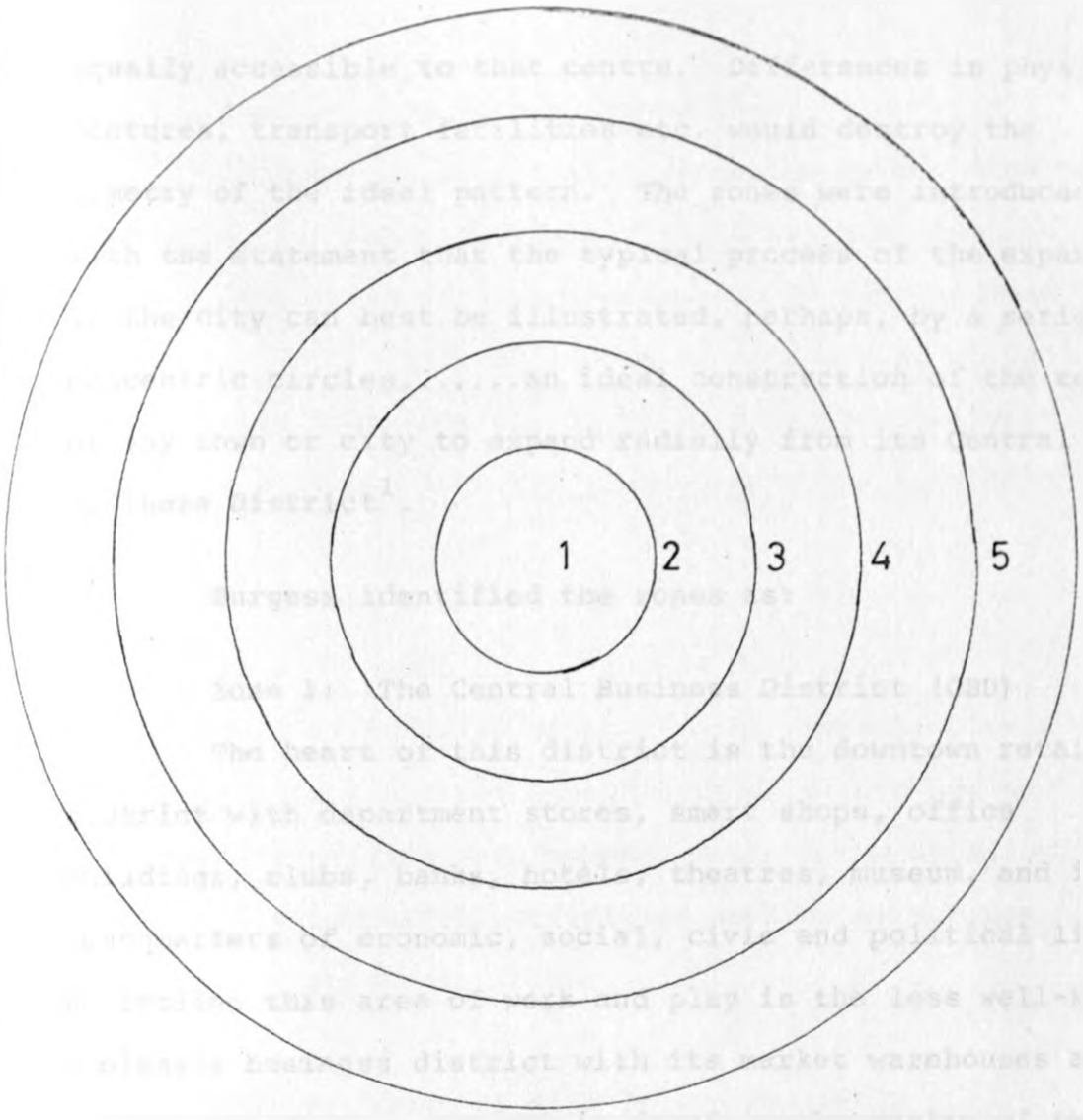
Burgess and the Concentric Zone Theory

The Concentric Zone Theory is one of the first of the models of residential patterns. It was formulated in the early 1920's by E. W. Bugess, a Chicago sociologist. Burgess was interested with the great difference between various neighbourhoods of the city and one of the earliest goals was to try and find a pattern to this patchwork of differences. He used mapping methods which allowed identification of the city's natural areas and from this Burgess produced his famous inductive conceptualisation of the city as a series of concentric zones. According to Burgess, a city can be divided into five main districts that follow concentric zones or rings surrounding the city. This is based on the idea that similar functionally related activities will locate at the same distance from the centre of the city; that is, the Central Business District (CBD).

Land uses from the CBD are sorted out in order of their relative ability to benefit and to pay for proximity to the centre. Each zone would be of relatively homogeneous land use and as physical growth proceeds outwards from the centre, then areas occupied at the same time will have similar character.

From an economic point of view, the regularity of a concentric zone would only result if sites at a given distance from the centre irrespective of direction were

ONCENTRIC ZONES MODEL (E.W. BURGESS).



CENTRAL BUSINESS DISTRICT
TRANSITION ZONE
LOW INCOME HOUSING ZONE
HIGH INCOME RESIDENCES
THE COMMUTER ZONE

SOURCE : W. LEAN & B. GOODAL : ASPECTS OF LAND ECONOMICS Pg. 194.

equally accessible to that centre. Differences in physical features, transport facilities etc. would destroy the symetry of the ideal pattern. The zones were introduced with the statement that the typical process of the expansion of the city can best be illustrated, perhaps, by a series of concentric circles.....an ideal construction of the tendency of any town or city to expand radially from its Central Business District[1].

Burgess identified the zones as:

Zone 1: The Central Business District (CBD)

The heart of this district is the downtown retail district with department stores, smart shops, office buildings, clubs, banks, hotels, theatres, museum, and its headquarters of economic, social, civic and political life. Encircling this area of work and play is the less well-known wholesale business district with its market warehouses and storage buildings. The CBD is found in the centre of the city and surrounds an area where the town initially started growing. In theory, it must be an area that is easily accessible from all directions within a region so that economic activities located in that area have to compete for the location in the area to maximise their profits, hence the intensive use of the region.

Zone 2: The Zone of Transition.

This is the area that is occupied by the transport terminals, for example, railway stations, bus stations, parking facilities for trucks etc. it is also an area of residential deterioration caused by encroaching of business and industry from Zone 1. It forms a factory district for its inner belt and an outer ring of retrogressing neighbourhoods.

Zone 3: Zone of Low Income Housing.

This is normally recognised by highrise blocks of flats with low rents but a high rate of return per hectare because of intensive development. Within the locality there may be light industrial activities such as warehouses, simple assembly and processing firms.

Zone 4: Zone of High Income Residents.

In this area are normally found single family dwellings occupying individual plots that can afford the amenity of private grounds for each residential unit. The area of plot for each individual unit increases the further away one moves from inner the city. This area gradually gives way to the outer suburbs of the city with densities of residential development intermixed with agricultural activities e.g. market gardening.

Zone 5: Commuter Zone.

In many urban areas, this forms detached residential areas and satelite commercial centres. Most of the residents work in the big city and commute there daily using the transport system between the city and these suburbs.

These five zones have been interpreted as indicating a continual increase of socio-economic status away from the city centre.

Although the zonal model was presented as one of expansion from the city centre, the original formulation gave little indication on how this proceeded, or on why the more wealthy residents chose to live at considerable distances from the city centre.

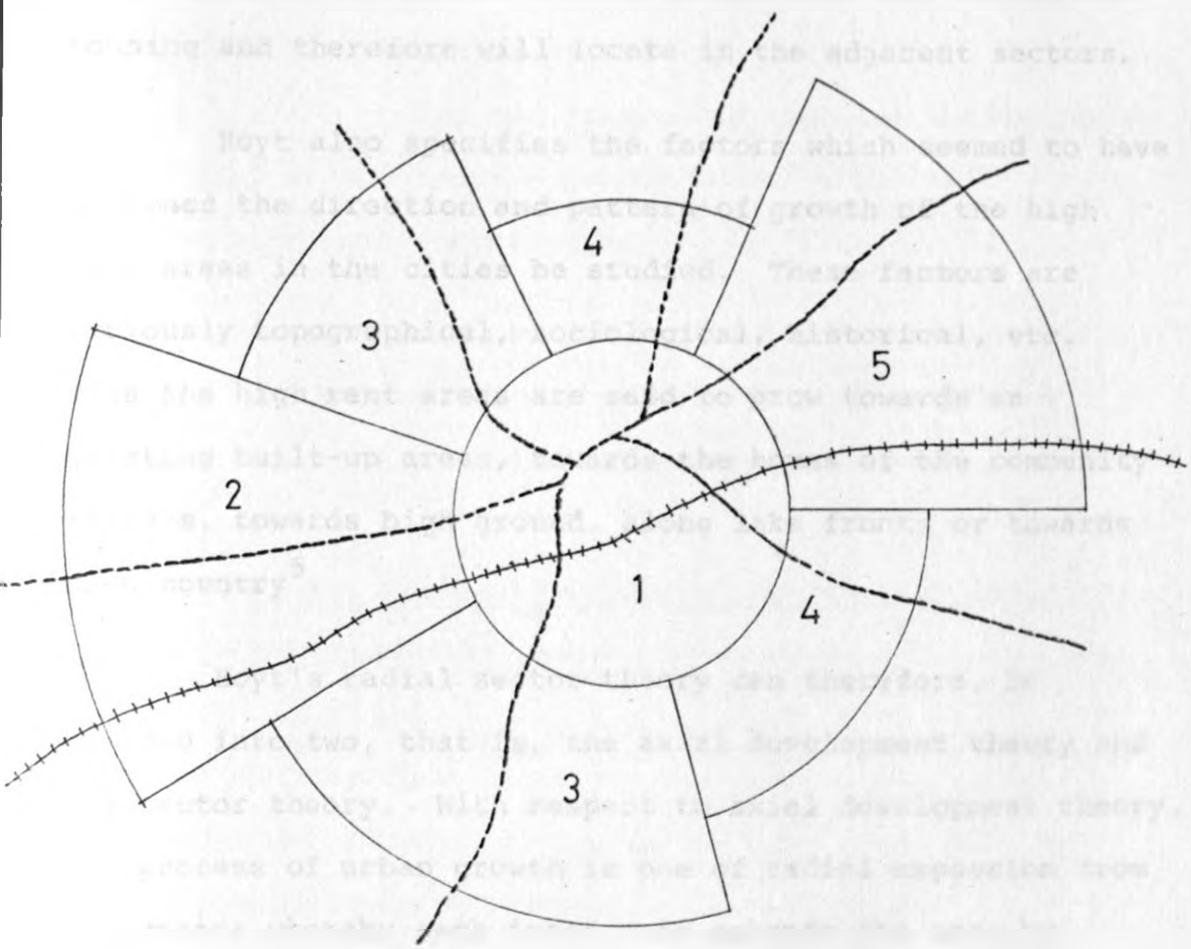
Burgess was criticised as having ignored the factor of inertia. Immobility is considerable within cities, for buildings, streets, railways and occasionally even some cultural groups are not easily transferred to other locations. Accessibility surfaces also change over time, and not uniformly, so that developing structural patterns are imposed upon a generally conservative existing mosaic. The degree to which a city re-orders itself to the new influences depends on the mobility of people and capital, the readiness with which people will move and write off earlier capital investments, and the importance to them of marginal benefits in for example, accessibility[2].

This was the second model of residential patterns and was developed by Homer Hoyt in 1939. When referring to residential uses, Hoyt paid attention to indigeneous characteristics of home and neighbourhood. The mechanism he suggested is now generally known as filtering, by which the higher income groups periodically demand new housing and their former homes are bought by lower income groups, for whom they represent an improvement down the social standard. Thus homes slowly filter down the social scale and individuals filter up the housing scale[3].

The main reason suggested for the initiation of filtering was deterioration of the housing stock of an area.

Neighbourhood desirability is correlated with age because according to Hoyt "houses with increasing age are faced with higher repair bills. This steady process of deterioration is hastened by obsolescence: a new and more modern type of structure relegates these structures to the second rank. The older residents do not fight so streneously to keep out inharmonious forces. A lower income class succeeds the original occupants. Owner occupancy declines as the first owners sell out or move away or loose their homes by foreclosure. There is often a sudden drop in value due to sharp transition in the character of the neighbourhood"[4].

RADIAL SECTOR MODEL (HOMER HOYT).



CENTRAL BUSINESS DISTRICT
HIGH INCOME LOW DENSITY RESIDENTIAL AREA
MEDIUM INCOME RESIDENTIAL AREA
LOW INCOME HIGH DENSITY RESIDENTIAL AREA
MANUFACTURING AND WAREHOUSING ZONE

SOURCE : JAMES JOHNSON : URBAN GEOGRAPHY (1972) Pg. 173.

According to the sector theory, the pattern of residential location is not completely explained by the filtering down process. The higher income groups occupy new houses in the best residential land and in the high rent sector. The lesser-income groups also can afford new housing and therefore will locate in the adjacent sectors.

Hoyt also specifies the factors which seemed to have governed the direction and pattern of growth of the high rent areas in the cities he studied. These factors are variously topographical, sociological, historical, etc. Thus the high rent areas are said to grow towards an existing built-up areas, towards the homes of the community leaders, towards high ground, along lake fronts or towards open country[5].

Hoyt's radial sector theory can therefore, be divided into two, that is, the axial development theory and the sector theory. With respect to axial development theory, the process of urban growth is one of radial expansion from the centre whereby each inner zone extends its area by invading the adjoining zone towards the periphery of the urban area. The theory represents a natural progression of thoughts from the concentric zone theory because accessibility to a single focal point is still a basic premise. However, accessibility is considered in terms of time as well as physical distance and it is accepted that transport facilities

in any urban areas are limited, therefore, movement will be concentrated along particular routes and the form of urban expansion will be controlled by available transport facilities. There is an extension of each type of land use along the main transport routes especially the fastest ones, and this would result in star shaped pattern for the built up urban area, the number of arms to the star depending on the number of main routes to the town. This theory leads to an irregular land use pattern.

The second subdivision, that is, the sector theory suggest that growth along a particular axis of transport usually takes the form of similar types of land use.

The Trade-Off Theory of Residential Location

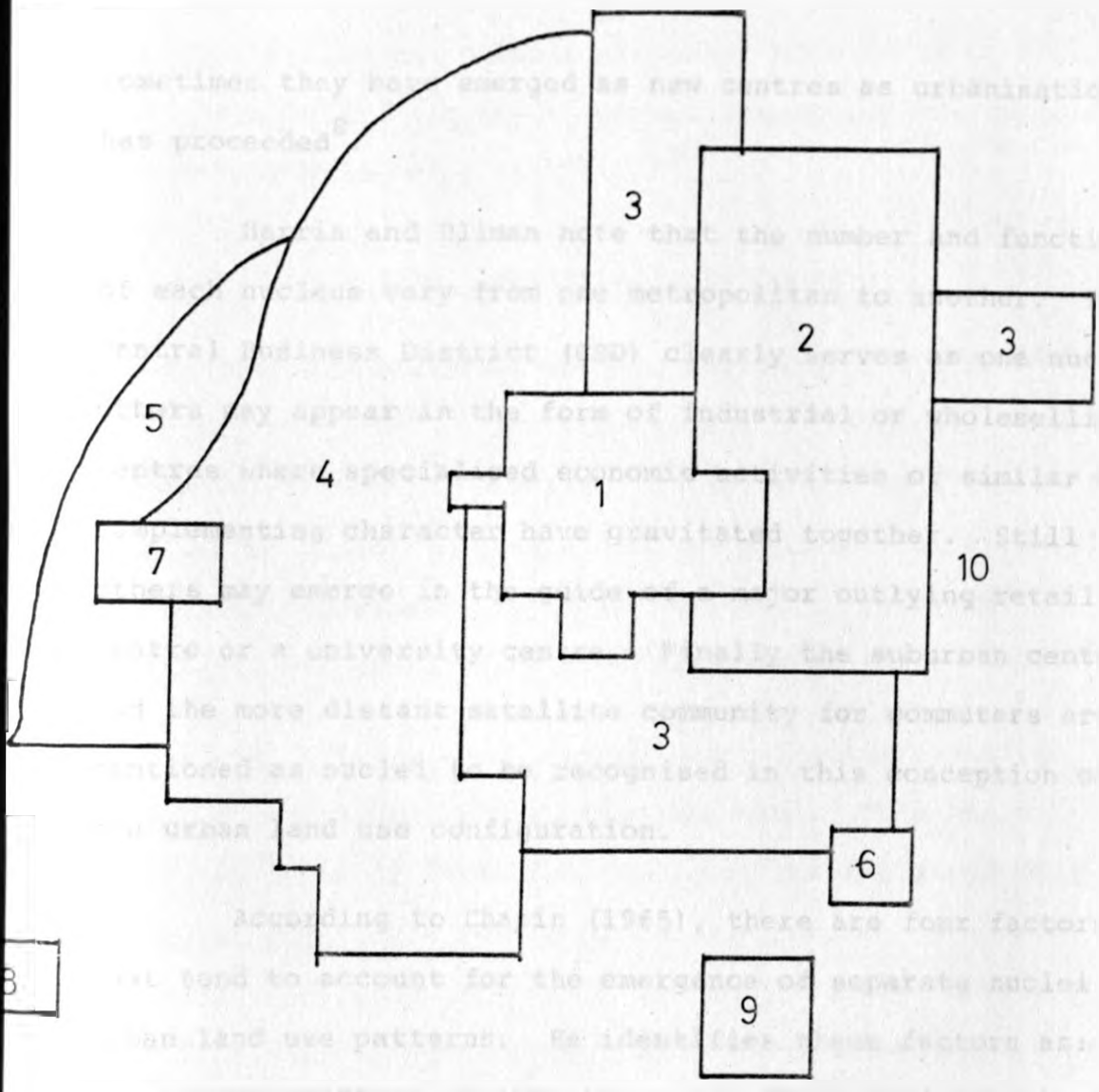
When economists became interested in the location of activities within the city during the late 1950s, the problem of residential location was approached by not regarding the location of a household as being determined by the availability of housing but the household was assumed to find its optimal location relative to the centre of the city by trading off travel costs, which increase with distance from the centre and locating at the point at which total costs are minimised. This theory has been described as a trade-off theory, but it has also been called the least cost theory of residential location[6].

Evans writes that the basic of the trade off theory is that the householder attempts to minimise the cost of his location by trading off rents against travelling costs and that the primary factor in determining his location is the total rent plus travelling costs which he has to pay at any point. These costs vary with distance from the place of work. When all the households in the city attempt to minimise costs in this way the result is a predictable pattern of location of the different types of households. Those for whom proximity to the place of work is the most valuable locating near it. Those for whom proximity to the place of work is least valuable location on the periphery of the city. For this pattern to result, it is however, necessary that a substantial difference exists between the rents or travelling costs[7].

Harris and Ullman's Multiple Nuclei Theory

The multiple nuclei hypothesis is built around the observation that frequently there are a series of nuclei in the patterning of the urban land uses rather than the single central core used in the other two theories. In expanding on this concept in an essay on the nature of cities, Harris and Ullman (1945) observed that sometimes these were distinct centres in the origins of metropolitan area, persisting as centres as growth has filled in the areas between them, and

MULTIPLE NUCLEI MODEL (C.HARRIS & E.ULLMAN).



CENTRAL BUSINESS DISTRICT
WHOLESALE AND LIGHT INDUSTRY
LOW INCOME HOUSING
MIDDLE INCOME HOUSING
UPPER INCOME HOUSING
HEAVY INDUSTRY
OUTLYING BUSINESS AREAS
RESIDENTIAL SUBURB
INDUSTRIAL SUBURB
COMMUTER ZONE

SOURCE : JACK HARVEY : URBAN LAND ECONOMICS Pg. 232.

sometimes they have emerged as new centres as urbanisation has proceeded[8].

Harris and Ullman note that the number and function of each nucleus vary from one metropolitan to another. The Central Business District (CBD) clearly serves as one nucleus. Others may appear in the form of industrial or wholeselling centres where specialised economic activities of similar or complementing character have gravitated together. Still others may emerge in the guide of a major outlying retail centre or a university centre. Finally the suburban centre and the more distant satellite community for commuters are mentioned as nuclei to be recognised in this conception of the urban land use configuration.

According to Chapin (1965), there are four factors that tend to account for the emergence of separate nuclei in urban land use patterns. He identifies these factors as: the interdependence of activities and their need for close physical proximity to one another; a natural clustering tendency among certain types of activities which find it mutually profitable to congregate together e.g. retail centres, medical centres, etc; the appearance of centres to accommodate activities that may have no particular affinity for one another, but which are inimical to other uses by virtue of the traffic they generate, the extensive railroad or truck-loading facilities they require etc., and

finaly, there is the related factor of high rents or high land costs which have the effect of attracting or repelling uses in the process of nucleation[9].

Other Determinants of Location

Chapin identifies another series of influences affecting the location and arrangement of land use. These are those with social origins. Socially rooted factors of land use according to Chapin can be "explained in terms of ecological processes with their physical context and organisational processes with social structural context"[10].

The primary and broadest basic process identified by urban ecologists is called aggregation. This has a localised frame of reference involving the sequences of change which occur within a particular locale. The most important localised sub-processes of aggregation have been identified as: concentration and dispersion of services and populations, centralisation and decentralisation; segregation of populations into various distinctive areas; dominance and the gradient of receeding dominance in the successively more peripheral sub-areas of the community and; invasion of areas by groups, giving rise to succession of one group by another[11].

Dominance, Gradient and Segregation

These three ecological processes offer a means of understanding the social aspects of the patterning of the city. 'Dominance' is used in the sense of one area in the city bearing a controlling social or economic position in relation to other areas. 'Gradient' is a term the sociologist has developed to indicate the receding degrees of dominance from some selected dominant centre to the more distant locations relative to that centre. 'Segregation' is a related process of clustering. it is a selection process by which homogeneous units become grouped together to form clusters. Taken as a series, the ecologist employs these three processes to describe the way in which natural social areas develop.

These processes were first identified in a systematic fashion as part of the concentric zone theory. Thus the Central Business District (CBD) is one centre of dominance, and the gradient of its influence over other business centres or even over other use areas can be described in each successive concentric zone.

The sector theory explaining the distribution of high-value residential areas is also adaptable to describing these processes. For example such processes are seen in the presumed controlling position of high-value areas in the downward gradients noted in adjoining sectors, and in the

clustering of uses like character and intensity of development within certain segments of the pattern.

The multiple nuclei concept is particularly graphic for describing dominance and subdominance within the urban centre and is adaptable to explain each of the other related processes.

Dominance is most readily illustrated in studies of residential areas. Assuming some physical basis for delineating residential neighbourhoods in a metropolitan area, they can be ordered into a system of dominant or subdominant neighbourhoods, positioned according to prestige factors especially land values and rental levels. Prestige is a socially rooted determinant of dominance.

Gradient is directly related to the concept of dominance. The degree of increasing or decreasing intensity in the phenomenon being observed establishes the gradient or gradation from full dominance to total subdominance. The gradient extends from a point of greatest intensity to areas of low intensity. Gradient is a concept frequently used to represent 'decay' in population density. land values or other phenomena exhibiting systematic gradiations in spatial patterns.

The segregating process results in the identification of distinct prestige areas, slum areas, areas of high incidence of disease etc. The extent and rapidity of the sorting going on is a function of attitudes, decisions and actions. They involve matters such as deed restrictions, zoning, condition of housing market, family ties, location of place of work etc.

These diverse factors may produce segregation either as a calculated result or as an unexpected result[12].

Centralisation and Decentralisation

'Centralisation' usually refers to the congregation of people and urban functions in a particular urban centre or its functional use areas in the pursuit of certain economic, cultural, or social satisfactions. 'Decentralisation' generally refers to the breaking down of the urban centre with the accompanying movement of people and urban functions to fringe areas or to new satellite centres.

Viewed in terms of the social institutions of the community such as business, religion, education, recreation etc., centralisation involves the settlement of people and the related development of places of work, education, entertainment and worship in a more or less compact relationship in a single centre. Conversely, decentralisation

involves settlement patterns of poly-nulceated order with the appearance of outlying centres of work, entertainment, education, worship, etc. One involves migration of people and economic activity into the central city and one involves migration outward to fringe areas or nearby subcentres[13].

Invasion and Succession

'Invasion' is the interpenetration of one population group or use areas by another, the difference between the new and old being economic, social, or cultural.

'Succession' occurs when the new population group or use types finally displace the former occupants or uses of the area.

Invasion of one population group by another is usually a spatial manifestation of the change processes at work in the social structure of the city. Population group invasion takes place in residential areas when one income, racial or ethnic group penetrates an area occupied by another, usually, an upper-status social group gives way to a lower-status social group. The processes of invasion and succession tie directly into the concentric zone theory by describing physical structure and change in the city. In describing growth of the city in terms of concentric rings, the theory anticipates the operation of these processes and

the 'filtering down process of residential occupancy, with the invasion-succession processes being most in evidence in the 'zone of transition'[14].

Human Ecological Approach

This approach refers to the attempt by ecologists to explain the distribution of land values and the location of urban sub-areas based on sociology and human ecology.

In explaining urban structure from a human ecology approach, it is asserted that firstly, land values determine land uses and secondly that other factors are more influential than land values themselves. Human ecologists argue that land values not only determine the type of land use but also determine the type of building to be erected in an area. They add that various uses establish the land prices by bidding for the most advantageous sites.

The interest in residential location by human ecologists stems from the social dimensions and issues involved. The esentials of human ecologists residential location theory was presented by Amos Hawley who suggested that the reason for residential differentiation is to be found in the rental value of residential land. Rental value they argue, is a combination of land values, location of other activities and the time and money costs of transportation to urban activity centres. Hawley argues that .....

'Since households cannot compete successfully with the more intensive land uses such as business and industry. They are relegated to less accessible sites with lower rental values'[15] He adds that residences on high value land are usually in deteriorated condition due to the speculation with which the land is held leading to occupation of such houses by low income families. This theory accounts for the existence of grey areas in proximity to the central city. This explanation is partial in that because there are cases where profitability does sustain investment in such low income housing areas, low maintenance costs, low vacancy rates and low taxes are some reasons for such profits. This explanation of urban residential location depends on urban growth since growing urban areas expand as new houses which cannot be built within the existing city appear on the cheaper land of the periphery.

The Social Area Analysis Approach

This analysis was developed by sociologists in their attempt to study the dimensions of urban society and the consequent residential patterns. Their study involved identification of the social areas of a city and integration of the observed residential differentiation with a theory of social change. To apply their theoretical construct of societal structure to areal differentiation. Sociologists Sherky and Bell selected social rank, family status e.g. number of children, education level and ethnic status as

their indices. The scores of these indices from various cities were used to form a two-dimensional social space whose axes were the social rank and urbanisation dimensions. It was found that the two dimensions were not independent. In some cities, the proportion of single family dwelling units was positively related to social rank and not associated with urbanisation.

The criticism that has been levelled on this analysis is that although it provides a fairly full description of the main dimensions of spatial aspects of social structure where it has been tested, it fails to give a complete summary. It has also been accused of housing measurement problems and inadequate representativeness of the dimensions.

Factorial Ecologies

Factorial ecologies analyse the associations between a whole battery of socio-economic, demographic and other characteristics to find out what dimensions result. In this approach, factor analysis is utilised on a correlation matrix which represents the similarities between pairs of areal distribution..... 'Thus, for example, a high positive correlation indicates two very similar distributions over a set of areas - where one value is big so is the other and vice versa; a nil correlation indicates that where the

value for one variable is high the other is low'[16]. Most of the variables used in factorial ecologies fall under categories of socio-economic status, life style and family status and ethnic status. The main constraint in factorial ecologies is that determination of the factors is arbitrary and follows only mathematical rules.

Historical Development of Nairobi's Residential Patterns

It was Sir Gildford Molesworth, one of the Engineers of the Uganda railway who first decided that railway headquarters should be located on the present Nairobi site. After the route was inspected, he wrote;....."Nairobi has, with great judgement been selected as the site for the principal workshops. It is approximately 5,500 feet above the level of the sea which ensures a comparatively salubrious climate, there is ample space for level ground for all sorts of requirements, and excellent sites for the quarters of officers and subordinates[17].

Nairobi was, therefore, established with the railway encampment as its nucleaus in 1899. In 1900, an arbitrary circular boundary of 1½ mile radius was declared. The town consisted of the railway centre, the European business and administrative centre, the Indian Bazaar, the railway quarters, the European residential suburb and the military

barracks outside the town.[18]

According to Yahya (1969)[19], this establishment of Nairobi as a railway headquaters was an improvement in transport services in Nairobi and it caused movement to sub-urban areas. Another factor which contributed to this movement was the availability of cheap land, Yahya adds that the scramble for land in the suburbs may have also been partly motivated by "Anglo-Saxon agrarian values and romantic dreams of rustic innocence", he writes: ....."It must be remembered that this was a time of active anti-slum campaigning and thinking in Britain. The Garden City Movement was at its height. It was natural therefore that Nairobi's development should be influenced by these values and preference which include among other things, a detached home with a large garden, spacious parks and public open spaces, plenty of fresh air, and wide landscaped thorough-fares".

Gattoni and Patel (1973)[20] write that by 1906, the population in Nairobi had reached 11,000 and that definite land use zones were by then apparent. The appearance of these land use zones was both by 'chance and choice' of the inhabitants.

Because Nairobi's initial nucleation came about because of the railway, the railway administration took the responsibility for its European and Asian employees. Thus

all housing for its employees within the railway boundary was to be funded by the Kenya-Uganda railway. With this in mind, the plan divided housing within the railway boundary into two residential areas. According to Emig and Ismail (1980)[21], the two residential areas within the railway boundary was for:-

a) Railways senior officers who were all Europeans, and

b) Railway junior officers or better known as subordinates who were also nearly all Europeans.

Yahya notes that Nairobi's residential areas developed in a 'haphazard and unplanned' manner but with signs of nodation or concentration around specific suburban growth points. Growth, he adds, "did not take place in concentric circles uniformly around the town, rather it was a process of nucleation along specific sectors or corridors, the nodes tending to develop more or less haphazardly within these sectors.[22]

In the development of residential areas for the railway employees, the area for senior officers was located to the west of the railway line and it is known as the 'hill' area. It is one of the most fertile areas of Nairobi with rich red soil in a hilly well drained area. The area was to

be laid out with bungalows for the senior officers and there was availability of unlimited space to the west of this area in case expansion was necessary at a later stage. Here, in the most attractive surroundings of the region, the senior officers and their families would be away from the noise and inconveniences of the railway yard.[23]

The area of subordinates was located close to the railway line on a partly flat area close to the hill area. Drainage was not a big problem as the area lying to the eastern side was lower. The area was engulfed to the south-east northwest by the railway line and by station road (now Moi Avenue) to the north-east. The houses were to be placed close to each other in rows running parallel to the railway line to the south-east. The area for European and Asian traders was an extension of the subordinates' area, but was much smaller and was located to the north of the station yard separated from the subordinates residential area by station road and separated from the station yard by the railway line. Here the traders have to build their own housing which was to be mixed, with their commercial enterprise. The area bordering station road and which had about the same soil characteristics as the subordinates' area had, was expected to be used by the few European traders. The area at the back and close to the Nairobi River was to be used by the Asian traders[24].

Gattoni and Patel (1973) note that by 1919, Nairobi became a Municipality with a corporation and the initial circular boundary was changed to include some of the residential estates like Parklands. The first low income housing schemes were started in Eastlands during this period[25].

In the early 1920s, there was a plan to make Nairobi a settler capital. This was a plan to make Nairobi a town for Europeans and Asians through the use of zoning.

In 1926 the European population made up less than 10 per cent of the total population of approximately 30,000 and occupied 2,700 acres of 42 per cent of the total area of Nairobi for residential purposes. This was some of the best area available in the region of Nairobi[26]. The plan for a settler capital suggested the opening up of more areas for European residential occupation in the central and hill areas with one acre as the minimum size of plots and an area to the west for a half acre minimum. This method of alienating as much land as possible in the best area of the region where there was already a concentration of Europeans was a way of safeguarding the European residential area from intruders and at the same time make it attractive for new European settlers. The area around Parklands was laid out as Asian area where the minimum size of a plot for one dwelling was half an acre. This was a special area for

'better class Asians'[27].

The lower part of Parklands and Pangani area were laid out for middle and lower class Asians. Pumwani location which was less than 5 per cent of the total area of Nairobi was laid out to be occupied by about 18,000 Africans who were living in Nairobi around 1926. This was equivalent to the size of Kilimani (for Europeans) which was occupied by 200 Europeans[28].

During the economic boom between 1927 and 1930, there was some upsurge in some forms of social provision. Nairobi Municipality built its first housing estate in Quarry Road on the site of the Old Carrier Corps Camp. 'Kariokor' estate was built in 1929, mostly 'in the form of brick dormitories'[29]. In addition, the government itself built the first phase of Starehe Estate for its own employees.

Around 1939, Nairobi was recovering from the economic slump of the early 1930s. One of the social projects to take place following this economic recovery was the demolition of the village of Pangani which had grown up in the earliest years as 'Native Village' to the east of the Fort Hall (Murang'a) Road and south of the Mathare River became an early centre of nationalist politics. Hake (1977) writes that this area was regarded as 'an eyesore' and as occupying a site which should be

developed as part of the modern town. The land commission in 1932-33 was told that Pangani was "an embarrassment to Nairobi as it occupied land required for an Indian residential area"[30]. Africans were, therefore, moved and Pangani was left to the Asians. many of the Africans moved to Shauri Moyo and Pumwani while others moved to Thika, and others built beyond Eastleigh on unoccupied common land. Some moved into the nearby Mathare Valley and built there.

During the Second World War, Ziwani Estate was built at "a total cost approaching £100,000" and the government extended Starehe to provide more housing for its own employees[31].

Despite all these projects, the African population in Nairobi still suffered from housing shortage, thus in 1942, a committee was appointed to investigate the need for African housing. The committee reported that housing was needed for 24,000 people. Plans were then accordingly made for further estates along the axis of what was then called Donhoolm Road (now Jogoo Road) to be called Bahati, Gorofani and Mbotela. Further areas were serviced and made available for employers to erect staff housing[32]. Makongeni Estate was constructed by the Railway administration.

Subsequent policy evolution led to the passage of the Housing Ordinance of 1943 which allowed for:-

1. The provision of accommodation for Africans by Local Authorities in towns at sub-economic rents, subsidized by local authorities.

2. Stricter enforcement of legal obligations of employers to provide housing for their workers.

3. Africans to build in towns using temporary materials.

4. The establishment of semi-rural 'garden village' communities outside the municipality where ".... an African worker and his wife could cultivate a small plot"[33].

All African housing estates were located in Eastlands between 1940 and 1960 and that their projected direction of growth was eastward across the Athi Plains. In 1942, Kaloleni was constructed by Municipal Council to the south-east of Shauri Moyo. Starehe Phase Two was constructed by the government during the same year, adding the houses to the old government housing estate. The spatial layout of the estates took the form of 'neighbourhood units'. The density of residential development was to be highest in these areas[34].

A master plan was prepared, for the first time, for a 'colonial capital' in Africa by a team of South African Planners in 1948. This plan perpetuated in effect,

Segregation in residential areas with European, Asian and Official (for African zones) clearly defined. The 'Garden City' appearance of the city was initiated during this period[35]. In the master plan residential areas were divided into two areas, that is the Economic Residential Zones and the Official Housing Scheme Zones.

The economic residential zones were intended only for people who could afford to buy plots and built their own houses or those who could afford to rent houses or apartments. Zoning laws would legally control density, which in turn would control the economic class which lived in a particular unit.

By official housing was meant those housing schemes, erected by the municipality, the government, the Kenya and Uganda Railways and Harbours and any similar schemes which may be erected in the future by the private enterprise of commercial or industrial firms to accommodate their own workers.

The existing official housing areas were to the east of the commercial and industrial zones, and according to the master plan, the new official housing zones were to carry on in that direction[36].

The 1948 Master Plan did not alter the spatial arrangement of the European areas. The Planning group found

that the area already geographically regionalised into thirty 'units' of varying areas. Each of these geographical areas coincided with former residential estates and farms. Otherwise, the unit boundaries were determined by surface topography and/or the road network. The size of each area was dependent on the extent of the sub-division and of the break up of the former homesteads. There was adequate open spaces in each unit and the residential developments were surrounded by ample open space. The master plan specified that the development of these units would be regulated on the basis of density of population per acre. The badly drained areas and river valleys in the European residential sector were to be reserved for the development of green belts and public recreation grounds[37].

The general position of the Asian residential area remained unchanged during the two decades beginning 1940. However, he points out that the master plan later in the period when Asians gained exclusive occupation of Parklands a new estate was opened for them in Nairobi South. The Asian residential areas were to be planned using the 'neighbourhood Unit' concept in which public space would be made available in close proximity to areas of high residential densities.

With respect to African Housing the socio-economic conditions in Nairobi following the second world war made the Kenya colony government recognise the indispensability of a

stable African population in Nairobi. Since 1941, the Municipal Council assumed the burden of housing all Africans employed in Nairobi who were not housed by their employers. The Council provided subsidized low rental housing. Around 1954, Makadara Estate was developed as an area where individuals, landlords or employers could build at their own expense along prescribed lines. In Bahati Estate plots were reserved for the richer Africans to build their own houses. Around 1957, Maringo, Jerusalem and Jericho Estates were constructed in a bid to "provide a new layer of more expensive housing for better-off workers and thus relieve over-crowding in the older houses"[38].

During 1964 and 1965, plots were prepared on the site-and-service scheme of Kariobangi where 732 plots were open by 1966; the Kariokor redevelopment was also implemented, a sub-commitee was also appointed to look into the issues of rebuilding Pumwani. The East African Posts and Tele-communications administration built some blocks of flats in Ofafa during 1965 and the Ministry of Health and Housing sponsored the first 33 houses of an aided self-help scheme called the Otiende Estate, at Langata[39].

In 1964, the United Nations Programme of Technical Assistance appointed two experts; Dr. L. N. Bloomberg and Dr. Charles Abrams to look into the housing problem. The Bloomberg-Abrams study reported that a grave situation of

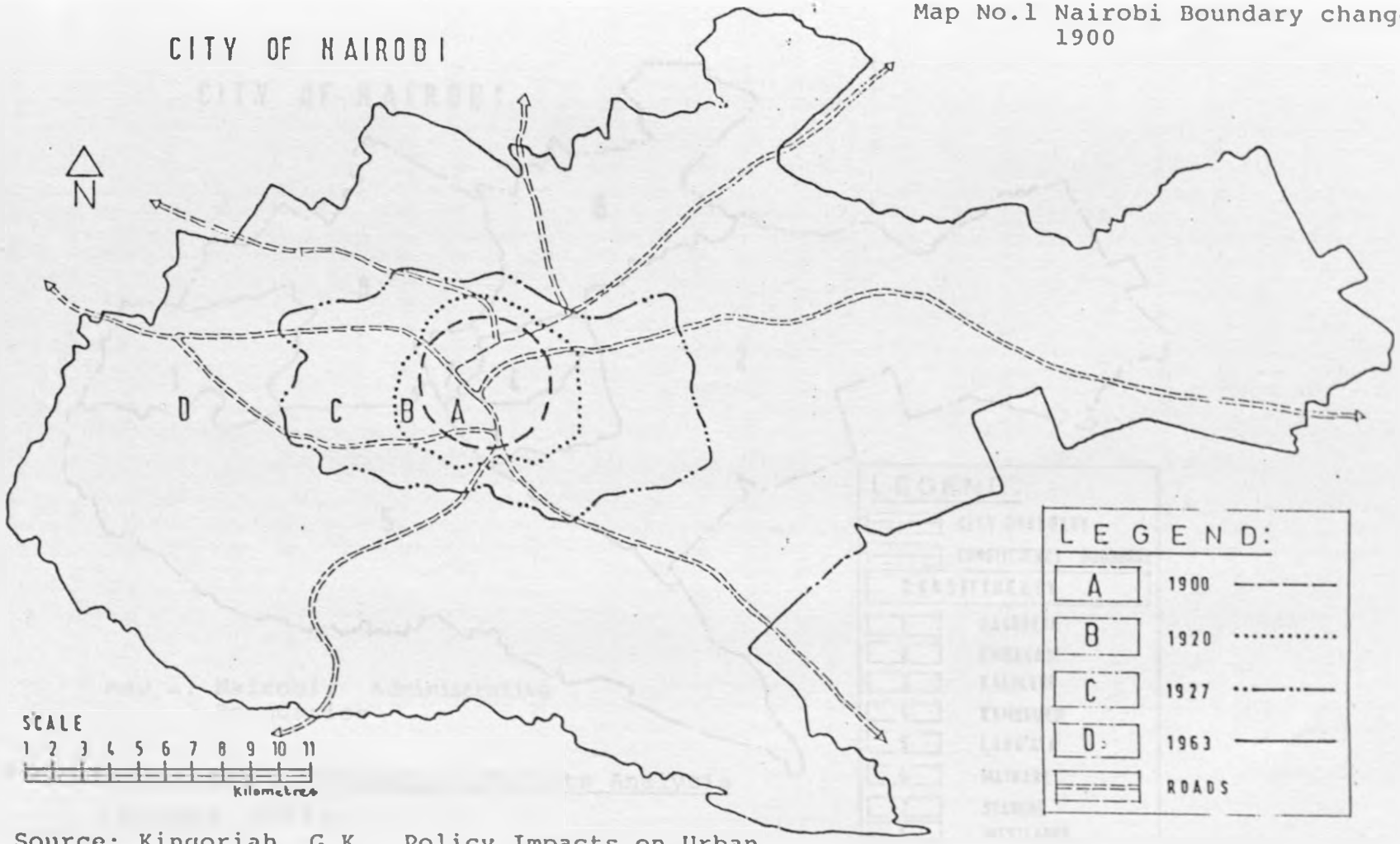
overcrowding in Nairobi - 52% of African house-households were living with 3 or more persons per room, and 74% with two or more[40]. As a result of the report, new estates blossomed around the city - Uhuru, Kimathi, Harambee, California, Jamhuri and Madaraka. Within five years, the City Council had built 3,800 houses. By 1979, the National Housing Corporation building operations were adding 300 to 350 houses or flats to the annual total. Later schemes developed the city to the east of Umoja, Lumumba and Dandora Estates[41].

NAIROBI: METROPOLITAN GROWTH STRATEGY
NAIROBI URBAN STUDY GROUP NCC 1973

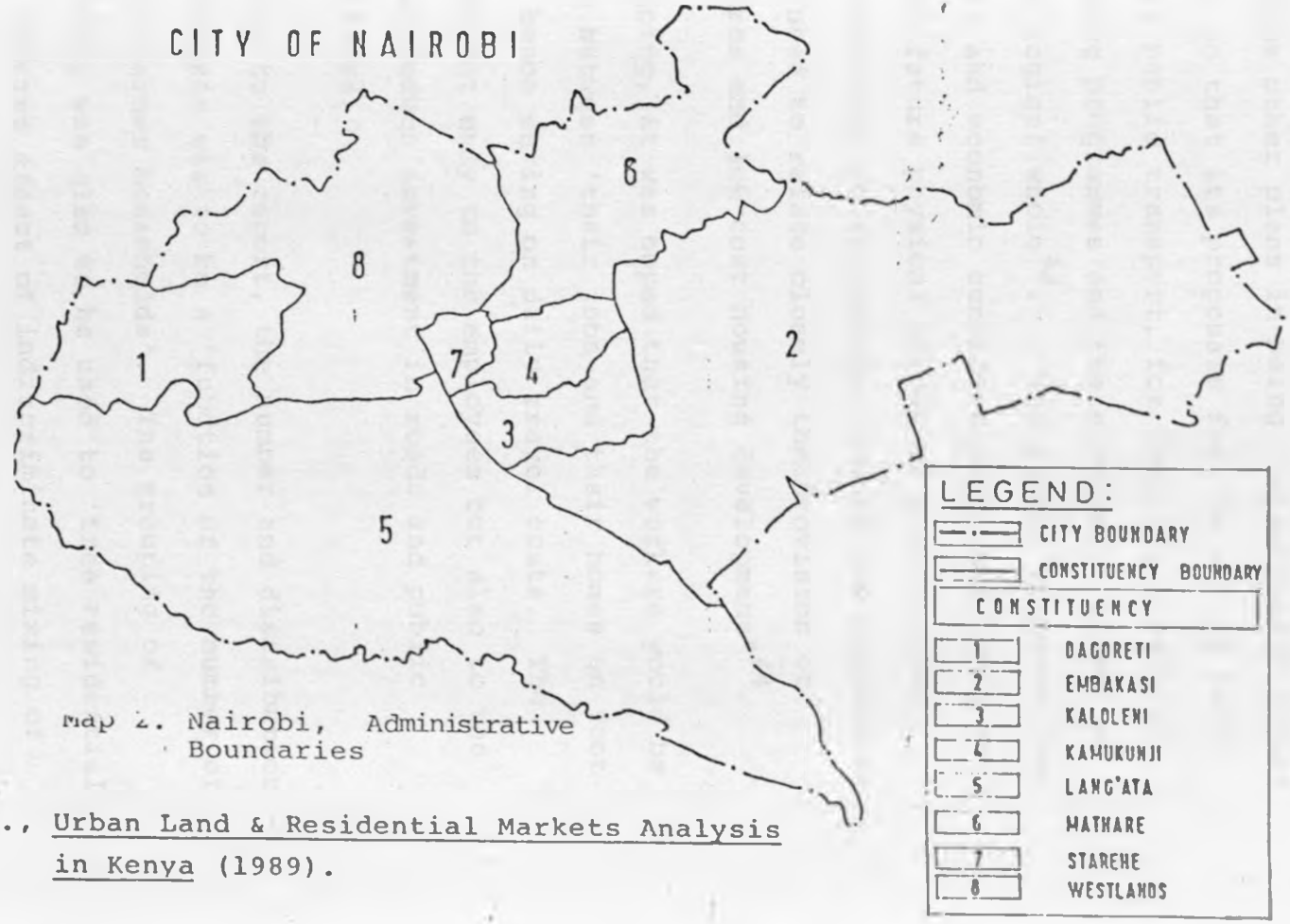
At around 1967, Nairobi's growth and development was experiencing pressures arising from population increase. These pressures were....."an impending water shortage, a road sytem increasingly unable to accommodate the growing traffic, and spreading, deteriorating shanty areas as rising numbers of low income migrants worsened the city's housing shortage"[42].

As a result, the World Bank, among others commissioned the Nairobi Urban Study in 1972, the report from this study was to present a strategy for the development of Nairobi.

Map No.1 Nairobi Boundary changes since 1900



Source: Kingoriah, G.K. Policy Impacts on Urban Land Use Patterns in Nairobi, Kenya 1899-1980



Map 2. Nairobi, Administrative Boundaries

Ondiege, P.O., Urban Land & Residential Markets Analysis in Kenya (1989).

The report according to its compliers, J.P. Mbogua the then Town Clerk and Amos J. Ng'ang'a the then City Engineer is distinguished from other plans in being comprehensive rather than piecemeal, so that its proposals for the use of land, for highways and public transport, for the city's central areas, for housing programmes and the employment promotion fit together in logical whole[43]. The report proposed four main demographic and economic considerations which must be reflected in the future physical layout of metropolitan Nairobi. In connection to residences, one of the considerations was "the need to relate closely the provision of employment centres and low-cost housing development"[44].

By so doing, it was hoped that the workers would be able to commute between 'their jobs and their homes on foot or by bicycle' hence saving on daily travel costs. The savings would be not only to the employees but also to the city which would reduce investment in roads and public transport facilities.

According to the report, the number and distribution of employment centres was to be a 'function of the number of surrounding wage-earner households'. The grouping of industrial activity was also to be used to 'free residential areas from the adverse effect of indiscriminate mixing of homes and factories'. By adverse effect was meant the hazards such as noise occasioned to residential neighbourhoods

by heavy traffic used by factories as well as cars and public transport means used to ferry workers. This would hopefully, make it possible to have quieter and more pleasant home neighbourhoods. Added onto this would be the obvious advantage of reduced expenditure on roads and infrastructure.

The study observed that there was ample space in and around the then existing built-up area. It was assumed that space would be developed. It suggested that the major areas for development be Dagoretti, Karen-Langata, the eastern area and the areas outside the north-eastern city boundary around Ruiru. It was anticipated that there would be 'informal' development of western shamba areas which could develop in size and structure such as to be fairly independent of the central city for many services. According to the report; the size of each (area) was defined by the population required to support certain services such as schools, clinics, shops and places of entertainment. Three levels of population were used: an area containing 5,000 people would be served by a nursery and primary school, and a local shopping centre and market, 25,000 people would support, in addition, one or two secondary schools, a petrol station and a large shopping centre; and an area with 250,000 people would contain a further major commercial and administrative centre, an institute of further education and a cinema[45].

Recommended Growth Strategy for Residential Areas

a) Old City Area

Note: By old city is meant the central commercial area and the adjacent industrial area.

This area is close to the city centre, is well serviced with water and sewers and has access on all sides to major roads. the study group suggested that the way in which that land was being used:....."should not be continued in the centre of the built-up area because of the danger, nuisance from noise, and because of the alternative urban uses to which such a prime site could be put"[46].

b) Central Area

This area was defined as the land bounded by the railway, Uhuru Highway and Nairobi River. It was projected that employment within this area would 'reach around 190,000 by the end of century'. Such growth it was reported, would cause congestion and reduce accessibility to the city centre. To check this growth, it was suggested that alternative service centres should be developed within the different districts of the city. Consequently, functions such as higher education, shops and entertainment, commercial offices and national and local government offices, it was suggested should be shifted to these service centres.

c) The Industrial Area

The same general principles (as for central area) were to apply. That is, decentralisation to reduce employment population growth.

d) Areas North of the Old City

This part takes in coffee plantations and the Spring Valley and Ridgeways Estates. It was anticipated that this area would be developed for urban uses by the end of the century. However, since the coffee area is job bearing, it was suggested that they should be retained. Since the area has steepsided valleys, it was foreseen that construction of medium or high density residential areas would be expensive, hence housing areas for low income households would be difficult to create, it was therefore, proposed that residential areas in that region be of low densities for high income households.

e) Areas South of the Old City

This area includes Kibera, Wilson Airport and land south of the industrial area. It was proposed that this area be developed primarily for low and middle income housing.

f) Karen-Langata

This is a mainly red-soil area with upper income household development. It was proposed that it remains an upper income households residential area. Those parts with black cotton soils would be developed for other income groups at higher densities.

g) Dagoretti

This area was recommended for industrial development.

h) Eastern Sector

It was proposed that most of the housing in this area be for low and middle income households. Industrial development was also proposed. The north-eastern area adjacent to Thika Road was recommended for housing "suitable for the full range of incomes, from higher density housing close to the central spine to lower density"[47].

i) The Western Shamba Area

Development in this area, it was suggested, should be concentrated into selected areas which can be provided with urban services.

The study group proposed that for the intended urban growth to be accommodated, land for residential and ancillary purposes, assuming a gross residential density of 100 persons per hectare, would be needed in the amount of 'around 26,300 hectares between the year 1974 and 2000'.

The group pointed out that: care should be taken in the future not to allow low income housing developments to become too concentrated, to have them interspersed with higher income districts and to have some high income areas located in the trade area of each secondary shopping centre[48].

Conclusion

It is notable that there is a prominent feature about Nairobi's residential structure, that is, differentiation on racial basis. Yahya (1969) notes that...."there are distinct African, Asian and European residential areas which tend to concentrate in the form of sectors radiating from the centre of the city"[49].

Yahya is of the opinion that Hoyt's (1939) [50] theory of city structures is the one most relevant to Nairobi's situation. This is however, only partial. The relevance is especially Hoyt's observations regarding:

a) The tendency for high-rent areas to progress towards high ground which is free from the risk of floods and to spread along lake, bay, river and ocean fronts, where such water fronts are not used for industry. However, this can be said to be more of a policy induced phenomenon and augments the tastes of the ruling classes.

In Nairobi, notes Yahya, many of the high income areas are situated on ridges with a panoramic view towards river valleys.

b) The tendency for high rent residential districts to grow towards free open country beyond the edges and away from dead end sections which are limited by natural or artificial barriers to expansion.

In Nairobi, it is observable that high rent areas such as Langata and Runda Estates are pushing frontiers further and further out into the open countryside.

c) The growth of high-rent neighbourhoods tending to continue in the same direction for a long period of time. In Nairobi, observes Yahya, mixing of various gradations of housing is prevented by administrative devices such as zoning and building covenants.

d) The tendency for high-rent neighbourhoods of a city not to skip about at random in the process of movement

but to follow definite paths in one or more sectors of the city.

In Nairobi, the preceeding chapter has established that high income residential development is usually attracted to the already well established sectors of equivalent status, mainly to the north and west of the city.

FOOTNOTES

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CHAPTER THREE

THE URBAN HOUSING MARKET

Introduction

Various definitions of a housing market have been given. Rapkin, Winnik and Blank (1953) defined the urban housing market analysis as ....."a process that attempts to identify and measure the forces that produce change in the size and utilisation of the housing inventory and thus influence the distribution of dwelling units among the population"[1].

Thus it is essentially an analysis of the forces of supply and demand conditions in the housing market. Broadly, supply is concerned with "how much of the product will be available at different prices when costs and the organisation of the industry are taken into account", and demand with "how much of the product the public will buy, given its income, tastes, and the price of the product relating to the price of other goods"[2].

Housing demand has been taken to be a function of such factors as; change in the level of population in urban areas; change in the real income level of urban households; change in prices of new and old housing, and availability and cost of credit. Supply on the other hand is a function of three main factors namely return to housing investment;

cost of input in the production of housing; and cost and availability of credit. The interaction of supply and demand will give the level of rent and prices that will be paid in free market conditions.

Besides the analysis of the urban housing market, this chapter also briefly analyses the housing situation in Nairobi and the reasons that have contributed to the acute housing shortage in the city.

THE URBAN HOUSING MARKET

Housing Defined

Housing may be viewed both as a process or product in the shelter delivery system. In its simplest sense, a house may be defined as a separate and independent place of abode comprising one or more rooms arranged for the use of one or more persons living as a single house keeping unit including the cooking and sanitary facilities intended for use essentially by that house keeping unit only.

Although housing has often been defined as a 'shelter', the question of housing is more complex in that a house is more than shelter; there are other attributes that are wound up with housing. They include privacy, relative location, environmental amenities and investment.

The World Health Organization (WHO) gave the definition of housing as....."the residential environment, neighbourhood, a micro-district of the physical structure that mankind uses for shelter and the environment of that structure including all necessary services, facilities, equipment and services needed for the physical health and the social well-being of the family and individual".

According to Kiamba (1980), accessibility and costs of transportation to other urban locations are important locational aspects of housing. Characteristics of the surrounding area and other environmental amenities affect the desirability of the residence.

In terms of economics, a house may be defined as a consumer good demanded for the flow of services it produces over its time. A house gives a diverse bundle of services associated with shelter and comfort, independence and privacy, status and like all other durables, services of a security and investment nature. These services may be obtained either by buying or renting a house.

The Housing Market

A housing market is defined as a representation of the interaction of the supply of goods and services and the demand for those goods and services. An urban housing

market then specifically focuses this interaction on specific locations and types of environments. In addition how many market works is defined by the 'terms of trade', that is the schedules by which supply and demand convey, the characteristics of the goods exchanged and the rights or privileges conveyed in the transaction[4].

Housing markets differ from most other economic markets in that for one, housing is locationally fixed, that is, it is immobile, thus the consumers move to the goods rather than the reverse, conventionally, there is no market place. Locational fixity implies that the spatial characteristics of housing units, their location with respect to other dwelling units, employment, shopping centres and neighbourhood amenities are purchased jointly with structural characteristics. The close proximity of housing units in urban areas indicates that there may be important physical or social externalities inherent in the location chosen for housing consumption. In addition locational fixity also suggests that dwelling units may differ, greatly in their accessibility to production or consumption activities[5].

Another attribute of housing is that it is highly durable, although there is a finite life expectancy for most housing structures, that life span can be very long. The durability of housing implies that there are fairly narrow bounds to the rate of disinvestment in existing structures.

Housing lasts a long time; old structures may become obsolete but they do not necessarily loose substantial market value because of their vintage[6].

Housing as a good and service is so expensive that house purchasing is a major investment decision for most households. The high cost of constructing housing implies not only that housing is expensive, but also that a large rental market exists, and that mortgage repayment makes owner-occupied housing an attractive instrument of wealth accumulation. In addition, it makes the level of new construction of dwelling units and the occupancy costs for prospective purchasers quite sensitive to macroeconomic policy[7].

Together, durability and supply cost indicate that it is typically fairly expensive to convert a unit in the existing stock from one configuration to another, suggesting that the supply curve for housing services (the flows of consumption) is inelastic, even over relatively extended periods and even if the elasticity of supply of newly constructed units is rather elastic[8]. Heterogeneity of housing indicate that housing units differ in a number of important dimensions, quantitatively and qualitatively, and thus that units that command the same market price may be viewed as substantially different by both suppliers and demanders.

Together, durability, heterogeneity and locational fixity indicate that housing market is really a collection of closely related but segmented markets for particular packages or underlying commodities differentiated by size, physical arrangements, quality and location.

Finally, housing is characterised by low turnover or stability of occupancy owing to the fact that most owners do not sell their houses frequently. Physical durability and stability of occupancy combine to make housing markets be dominated by the character of the existing stock of housing. Only a small proportion of this stock enters into the market for exchange over short periods of time. Thus there is always a much greater potential for disequilibrium to develop between housing supply and demand relative to other more fluid markets. In the short run therefore, housing markets of geographical distance regions can demonstrate substantial independence[10].

Housing 'Need' and 'Demand'

Housing need and demand are two important aspects of the housing market that need to be distinguished. Housing need may be defined as the quantity of housing that is required to provide accommodation of an agreed minimum standard and above for a population given its size, household composition, age, distribution, etc, without taking into account the individual households' ability to pay for the

house assigned to it[11]. Housing need constitutes a number of heterogeneous elements. It is possible to distinguish between three primary aspects of housing need:

i) The need emanating from net additions to population whether through natural increase or migration.

ii) The need ensuing from decrement of housing units through absolescence or demolition.

iii) The backlog of housing need composed of people who are either inadequately housed or without housing of any kind at the present time[12].

Increases in population resulting from both natural increase and also migration which results in an increase in population of particular areas necessitate continuous additions to the housing stock, failure to which overcrowding in existing dwellings and homelessness result. A constant depletion of the housing stock exists in any housing situation due to the loss of dwelling units through obsolescence, or destruction through such calamities as fire, floods, etc. Backlog of housing need relates to the annual construction required to eliminate deficiencies in existing housing supply. The backlog of housing need is taken to comprise the number of dwelling units required to house that part of the population which, on the basis of available evidence is either homeless or can be considered to be occupying over-

crowded, unsanitary or improvised housing[13].

Effective demand for housing on the other hand is a measure of the quantity of housing that a defined group of people can afford and are willing to purchase or rent at given prices or rentals. Effective demand is therefore a function of individuals' income[14].

Housing demand on the other hand is an economic concept because the standard and amount of housing a household can command will be determined by income and ability to pay. the achievement of a specified minimum standard of housing is not implied in the concept of housing demand. Demand for housing is affected by several parameters including income, price of housing, population, availability and cost of credit.

Consumer Theory and Housing Demand

In applying neoclassical models to housing demand analysis, important assumptions are made regarding a consumer behaviour, the nature of the commodity and the housing market. These assumptions are:

1. There are many buyers and sellers
2. In relation to the aggregate volume of transactions the sales or purchases of each household are insignificant.

3. There is no collusion amongst or between buyers and sellers.

4. There is a free entry and exit from the market for both consumers and producers.

5. Consumers have continuous transitive and established preferences over a wide range of alternative choices of housing and non-housing goods.

6. Consumers maximise total utility while producers maximise total profits.

7. There are no artificial (non-price) restrictions placed on the demands for suppliers and prices of housing services and the resources used to produce housing service. For instance house purchases are not constrained by finance rationing or the non-availability of preferred housing choices.

9. The market is assumed to be in equilibrium.

These assumptions define a set of conditions sufficient for the existence of a perfectly competitive market in housing services. Within this framework, the standard consumer choice model can easily be theoretically applied to housing. If the household has a rational and

complete preference ordering defined over the array of existing commodities, then by maximising utility subject to the budget constraint equating household income with expenditure over the relevant time period, it is possible to express the quantity demanded of any particular commodity, in this case housing, as a function of income, the price of housing and the price of all other commodities. This relationship is the demand function and its parameters can in principle be estimated empirically.[15]

It is difficult to derive utility and demand functions for housing due to certain characteristics of housing which fall under four headings namely:

1. As a durable asset housing structures provide both consumption and investment services and they are usually purchased with loan finance.

2. Housing is a complex, multi-dimensional commodity.

3. The standing stock is characterised by 'situation' attributes, defined in spatial or social terms, which generate inter-dependence elements in household utility functions.

4. In the housing market, even in equilibrium, there are likely to be frictional and search

costs which are significant enough to influence housing choice.

Durability is a characteristic having a direct bearing on the factors determining the demand for housing and influencing the specification of the housing utility function and the income constraint. Since housing is a durable commodity, households will have a long-time horizon in making decisions about housing expenditure. With respect to households' preferences for housing, there are two housing markets. There is demand and supply of housing as an investment good and supply for housing services. Households participate in the later by renting houses.

With respect to housing attributes, economists have recognised that housing is a multi-dimensional commodity. This implies that housing is a composite good, characterised by a flow of services. These services represent a variable mix of characteristics rather than for identifiable units of a commodity. Therefore, housing choice to a consumer depends upon the identifiable or perceived attributes e.g. accessibility, quality or environment, number of rooms etc.

Factors Influencing Housing Demand

Economists have observed that an increase in urban income may affect the demand for housing in either of two

ways. Firstly, it may affect the rate of household formation, for example, by encouraging persons who were previously doubling up into single households to move out into their own houses. Secondly, income increases may lead to economic independence of older children who may have been having the need for privacy. Such children may thus move out to form single family households. Increase in the rate of household formation may also result from early marriages which may be occasioned by income increases.

Another parameter affecting demand for housing is price of houses. House prices may either increase or decrease. An increase in house prices has the effect of reducing households' effective demand for housing thus causing an increase in doubling up as people find that they are not in a position to purchase owner occupied houses or afford the rental values in operation. Increased prices may also lead to vacancies in the submarket in which prices have increased. This would be due to people moving out of the higher units into cheaper available accommodation or doubling up. Although economists argue that an increase in the price of rental units causes people to move into owner occupied units, practically this is a rare phenomenon because the cost of owner occupied units remains prohibitive. Even where a household may be able to afford mortgage repayment for owner occupied units, there are other costs associated

with house purchase such as down-payments, legal costs and government taxes which make the final price of the units unaffordable.

On the other hand, decreases of house-prices increase households' effective demand for housing and decreases the level of house vacancies. It may also lead to household formation as households that were previously doubling up split up into several single households units. This 'doubling' up will however, occur if there is availability of alternative accommodation. Like price increases, price decreases will also lead to vacancies in the submarket in which prices do not decrease, that is, vacancies will occur in higher priced units as people move into the price-reduced units.

As noted earlier in this chapter, some of the characteristics of housing as an economic commodity are durability and cost. In view of its durability, investment funds in housing are required to be tied up for relatively long periods of time. With respect to its being expensive, housing requires huge amounts of resources for its acquisition, therefore necessitating mortgage credit. Thus availability or non-availability of cheap mortgage credit can increase or decrease households' effective demand respectively.

Factors Affecting Housing Supply

Supply of housing is measured in actual physical housing units in the market at any period of time. There is firstly, an inventory of housing units in use and this includes not only units which are occupied, which may be defined as primary units, but also those that are unoccupied, that is, vacant habitable units. Secondly, there are additions of new housing under conventional construction, new units under factory construction (prefabricated housing units or mobile units) and additions of other 'new' housing units as a result of sub-divisions of existing residential structures, conversions of transient and semi-permanent quarters into permanent units or adaptations of other existing structures in housing units. Thirdly, there are removals of existing housing units as a consequence of man-made causations such as demolition and abandonments as well as natural calamities such as destruction of housing units as a result of floods and other natural causes[16].

One of the components of housing supply is land. Land for housing is essential for access to employment, infrastructure and social services. The provision of land for housing is complicated by the fact that land has many uses other than for shelter and access. Among productive uses, housing competes for land with industrial, commercial,

administrative and recreational uses. These factors cause land to be expensive; and the price of land is a major factor in determining the use of land for housing. Differences in land price also reflect variations in accessibility of the location of any house to the Central Business District (CBD) and other centres of work opportunities[17]. Therefore, land makes up a high proportion of total dwelling cost.

The installation of services in the form of roads, water supply, sewerage, drainage and other utilities turns raw land into land suitable for housing. Although individuals or groups of people can build roads, schools and health centres, the servicing of land is generally undertaken by governments directly or through public corporations. These services are by nature, spatially fixed and have high fixed costs. The choice of level of service must be made to accommodate the preference and willingness to pay of urban households who are targetted to occupy any housing estate.

The next component of housing supply is the cost of construction. The proportion of housing cost allocated to construction varies considerably as a result of differences in the cost of materials and labour, construction techniques, the size of the structure and the cost of other housing components.

A final and very important component of housing supply is financial resources. Investment in urban housing involves purchase of land, construction of dwelling, and the provision of associated physical and social services. Financing of house purchase involves long term commitments by lenders to a highly non-liquid form of wealth. Dwellings are subject also to fluctuations in value quite apart from ordinary wear and tear on the physical structure. Changes in the surrounding neighbourhood and in public service networks can alter the value of a house in much the same way as changes in the amount of living space the house provides. Lenders therefore demand compensation for the risk involved in housing finance. This causes high interest rates on the finances allocated for housing in financial institutions.

Factors Affecting Housing Supply

The most important factor which influences the supply of housing is the expected return from housing investment. The level of a housing developer's profit is defined as the difference between the final sale price of the produced unit and the sum of all production costs. The final sale price of a housing unit is in turn influenced by the prices of existing stock and the developer will have to influence over this price normally .

There are two important issues that influence the returns on housing investments. These issues are; vacancies, and current inventories. Vacancies are a function of rents, and prices of existing stock or the cost and availability of credit and residential mobility among housing stock. But vacancies may also be a function of market imperfections such as where there is lack of knowledge regarding the vacancy level in some submarkets by those demanding houses. Vacancies may appear in one market when there is extreme shortage in another or the owner of the units themselves may not know of the existence of demand for vacant units. Information flows in the housing market are important causes of housing vacancies and therefore of housing supply. A market that is characterised by little imperfect information may also be characterised by little construction activity even if demand is not the overiding constraint[18].

High vacancy levels that persist over relatively long periods of time usually point to a future lowering of house prices in that particular market. Investors will not usually start any new construction in a market characterised by a high level of vacancies. On the other hand if the level of vacancies is low or if there is a high rate of household movement into vacant units, house developers may take this as an indication to start new construction.

The housing stock at any period of time may be divided into two submarkets. These are; new construction and old units (those that would be competitive with new stock as opposed to those that would not). Old units within the existence of new stock are potentially substitutable for new stock unless their physical condition is so poor that buyers consider them to be qualitatively much inferior to new stock. If the quality attributes of the new stock and the old stock are comparable, then all these units may be considered to be in the same submarket and should command the same rent. The supply of new housing therefore is determined by qualitative dominance of old units that the consumer regards as being competitive with new stock and the prices that the units demand.

The second factor affecting housing supply is the cost of producing new units. The housing developer is an enterpreneur who is after maximising his profits. Before investing in housing, he considers other investment outlets. Higher property prices are an indication of potentially higher profits and will encourage the devloper of higher housing schemes. However, if the rate at which construction cost rise is higher then the growth in property prices in the same period, the rate of return on new construction might be actually less than the returns obtained by investing in old stock. Periods of high rises in construction costs

are usually associated with a smaller volume of new housing schemes. Important costs that would be considered in terms of housing include the cost of raw materials e.g. cement, sand, electrical equipment, paint, timber etc., cost of land, cost of transport, and cost of professional services. If costs are low relative to the prices of houses, supplies will go up. If costs are low and prices are low, there might not be any substantial change in supply of privately owned housing.

The third main factor, affecting housing supply is the cost and availability of construction finance. The actual construction of a housing development scheme will depend on the availability of short-term construction finance needed for one or two years while construction lasts. The availability and cost of short term credit enables the execution of new housing projects. Increased supplies of mortgage funds is an indicator of potential increased demand for housing, and leads to greater supply of housing units. Developers will endeavour to complete projects faster if mortgage facilities will be availed to contending home-owners.

In addition to the loan repayments, there are other annual costs such as maintenance and repair, insurance, rates, land rent, administrative costs etc. Housing developers rely heavily on the use of credit to finance housing construction. It is generally accepted that changes in the volume of credit

is linked to the general increase in the level of construction activity; and with a high level of economic activity.

The Market

The housing market may be divided into two broad categories. These are; the house purchase market, and the rental housing market. The house purchase market is merely concerned with the process by which the market for houses owned by individuals works. It deals with factors affecting supply and demand for individual houses. In the house purchase market, demand arises from households who wish to purchase their housing service by buying the asset for owner occupation. The rental housing market arises from households who opt to purchase their housing services through periodic payments, called rents. These guarantee ownership for only a period of time determined by agreements between landlords and tenants.

A housing unit may be measured either in terms of physical stock (how many) or in terms of flow of services it yields per period of time. Consumers will regard housing as varying in value according to their external locational setting and their internal or dwelling attributes of size, type and amenities.

Given a single dwelling, its owner and prospective buyer assumed to be well informed persons, the buyer will consider the collection of attributes that the dwelling represents and on the basis of his valuation of these attributes he will then decide upon the maximum price that he will be willing to pay for that particular dwelling. At the same time, the owner will have a minimum price for which he would be willing to sell his house. The exact price at which the transaction takes place will depend on the respective bargaining strength of the buyer and seller. There are however, occasions when no buyer has a ceiling price which is equal to or greater than the seller's floor price. In such a case many dwellings remain unsold. Alternatively there might be more sellers than buyers or more buyers than sellers. If there are more buyers than sellers, some buyers will fail to obtain a house while if there are more sellers than buyers, some dwellings will remain unsold. Under such circumstances the buyers and sellers may revise their ceiling and floor prices on the basis of their past experiences.

With respect to the rental market, the interaction of demand and supply will give the level of rent that will be paid in a free market condition. In the short term, the stock of rental accommodation will be fixed and the short run supply schedule will be inelastic. In the long run,

excess profits brought about by tenants offering relatively higher rents in competition for the limited amount of housing will encourage developers to put up more rental houses and the supply will go up.

Filtering

Under the free market, absent from government interferance, the principal means by which the housing occupied by the lowest income class is upgraded is by means of the filtering down process. Bourne and Hitchcook define "filtering down" in the housing market as the process in which the real housing consumption of families or of households changes over time, whether by the depreciation or renovation of the same dwelling unit or by the choice of a different dwelling unit (which may be newly constructed or has experienced depreciation, renovation or conversion from a different type). The process may involve changes in real incomes and or changes in the relative price of housing services.[19]

As the middle income class moves into small new houses or larger houses which have been discarded by the upper-income class, they pass their former houses onto the poor. The lowest income class progresses only if the filtering down process is proceeding faster than the aging of the houses being vacated. Any tendency or public

policy that speeds the rate of construction of new housing increases the rate of turnover at the top, therefore raises housing standards all the way down the line[20].

The "filtering down" process has been viewed by various people as a faster change in home values and rents relative to all residential prices and rents, consumer prices and consumer incomes. It seems that a shift in values or rents in any direction is accompanied by change in occupancy; and that the process leads to some sections of the existing stock to become vacated and occupied by lower income groups.

Kiamba (1980) identifies two processes of filtering, filtering down and filtering up. Filtering down occurs if the income of the person moving out is higher than the income of the person moving into the same house during the shifting of values/rents and change of occupancy, the opposite of this will be the filtering up. In Nairobi, the most prevalent case of filtering has been the filtering up processs. This has been symbolised by houses which are not or have become unaffordable to households for whom they were intended. This has been as a result mainly of high interest rates and inflation. The studies carried out on housing estates such as Pumwani and Umoja among others reveal that they are occupied by middle income households although they had been targetted for low income households.

Filtering process depends on the actions of middle and high income/cost range of the housing market. This would largely be accounted for by the high levels of housing provision, construction or injection on this top end of the market.[21]

Market Imperfections

A perfect market concept or model which was implied by neo classical economists in their description of market mechanism was a self-regulating market. Demand and supply were never far out of balance, the commodity traded was in the form of standardised units that were quickly supplied, easily divisible into convenient units, quickly consummable, easily transportable. Traders were supposed to be informed of all transactions in the market that is, there was supposed to be perfect information. In the case of the real estate market in general, the basic economic laws are the same as in the theoretical perfect market but the real estate market is far from perfect, It is subjected to sluggish reactions which leads to a constant state of imbalance such that while demand for real property is dynamic, supply is static.

Some of the causes of imperfections in the real estate market (of which the housing market is a component) are due to the fact that real estate is heterogeneous.

Every parcel of real property is different from all others. Each parcel of land (on which houses are built) is special and unique and there are hardly any standardised features. There is also the problem that while in a perfect free market buyers and sellers are fully aware of what is going on, they are in sufficient numbers to prevent any one buyer or seller (or any groups of buyers or sellers) from exerting a significant influence of price, and each product is sufficiently like every other product to be substituted for it. Unfortunately, real estate markets do not meet this criteria. Firstly, very little realiable information is available on market prices. Secondly, the potential number of buyers for a property may be severelly limited because of the location of the property. Under such conditions, each transaction involves a great deal of bargaining on the price with either the buyer or seller in an advantageous position.

Real estate is not a perfect product for a market place in which the free play between supply and demand is supposed to result in an equilibrium price which provides a maximum desirable distribution of the product. There is also lack of sufficient number of transactions relating to property which hampers the recognition of a perfect market price.

The second cause of imperfections is that there is no central market for real property. This means lack of communication between buyers and sellers as most transactions are conducted in private. Changes in the market conditions take a longer time to be generally recognised. Accurate information on sale prices and terms is hard to discover because there is no central timely place to provide complete information.

Another factor causing imperfections is time lag. A long period of time which is required for planning and building new structures delays the response of supply to pressures of demand.

The physical fixity and hence relative permanence of the structure, the design and other features mean that it is not readily adjustable to changing needs.

The characteristics of real estate as an economic good are not the only factors which contribute to the imperfections of the free market system. For example, the size and cost of housing is such that financing terms are more important than total price in determining whether the property will be purchased. The uniqueness of each property further creates problems in establishing a price.[22]

The Housing Situation in Nairobi

The prime factors affecting the housing situation in Nairobi have been identified as:

i) Population growth

ii) Income growth and distribution

According to the population census conducted in 1979, Nairobi had a total of 827,775 inhabitants. The estimated population in the city in 1983 was 1,006,000 persons with a projected population of approximately 1,284,000 in 1988 at a rate of growth of 5% per annum[23]. However, this rate of population growth is primarily affected by in-migration which, it has been estimated, accounts for about 75% of the growth. The population statistics for Nairobi may be translated into data regarding households and formation to give a picture of the housing situation confronting the city. The 1979 population census reported a total of 200,474 household residents within the limits of the city's administrative boundaries and it was estimated that there would be an increase of 67,800 households between 1983-88. This represents an additional 13,600 households annually, which implies that if a dwelling unit were to be furnished for each additional household, 37 units would have to be provided daily[24]. This would only take care

of additional households with deficiencies in the present stock not being taken into consideration.

However, while there is a need of approximately 13,600 supplemental dwelling units annually, the total output in both the formal and informal sectors totalled only about 5,000 units in 1983, which represented less than 40% of the city's requirements[25]. The formal supply can provide only a minimal fraction of the required housing production and present housing production rates are more than inadequate for meeting the housing requirements of Nairobi's ever increasing population.

The National Development Plan for the plan period 1984-88 had publication of the planned physical housing output of 7,000 serviced plots, 400 rental units, 200 upgraded units and a further 1,150 units for mortgage/tenant purchase or owner builder[26]. This translated to a total output of only 8,750 units against a need of 68,000 additional units over the 5 year plan period.

Income growth and distribution is another important parameter affecting the housing situation in Nairobi. This owes to the fact that a household's income level determines not only that households purchasing power and ability to pay for housing but also the quantity and quality of housing a household will find and be able to occupy. Enumeration in

the 1979 population census indicated that if the economically active age group in Nairobi is taken as that group of persons falling between the ages of 15 to 59 years, then the economically active population comprises a total of 530,000 persons, about 64% of the city's population.

In cases of high per capita income, its concentrated in the hands of few upper income households leading to lack of adequate purchasing power to the lower income groups who are the majority of urban dwellers.

Table 3.1 Income Levels in Wage Employment Sector in Nairobi for 1980

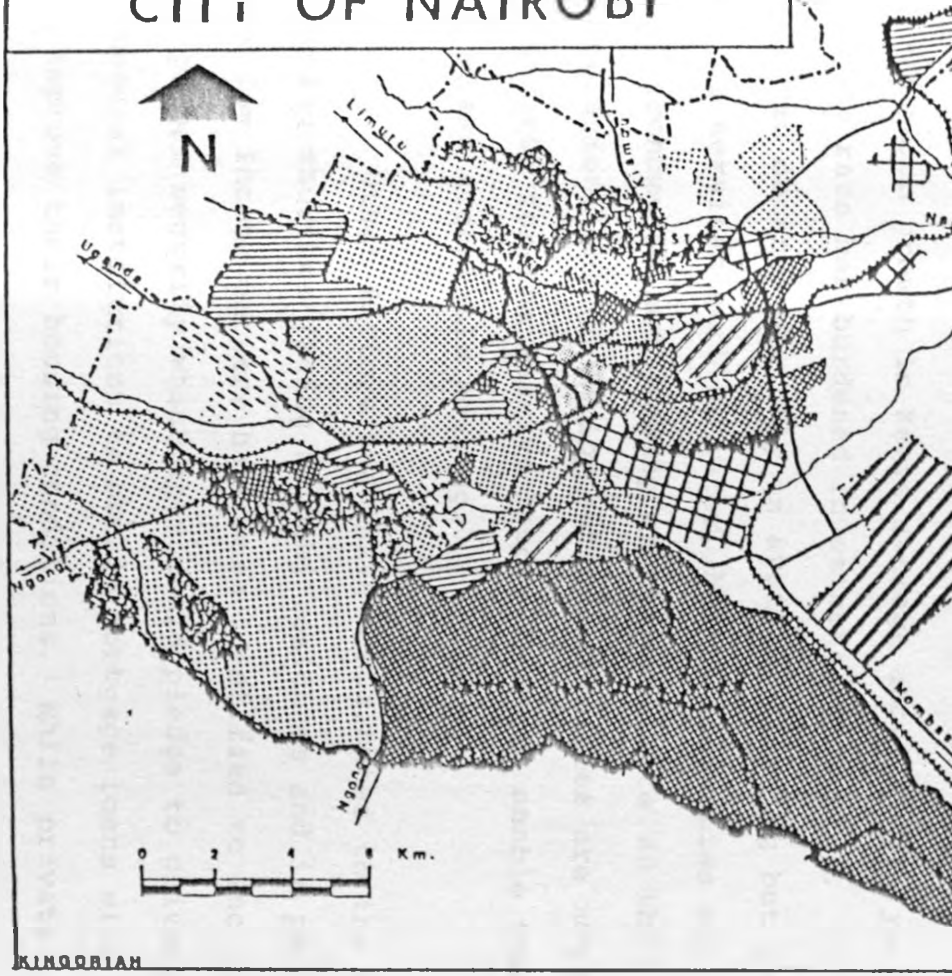
Income	No. Employed in that Group	%
Under 215	952	0.4
215 - 399	11,381	4.7
400 - 699	52,274	21.6
700 - 999	52,066	21.6
1000 - 1499	40,569	16.8
1500 - 1999	26,053	10.8
2000 - 2999	22,389	9.2
3000 - 5999	22,526	9.3
6000 +	11,793	5.7

Source: Development Planning Unit, London, Nairobi Project, 1983, London, 1983.

From this table, it is clear that of the total population in the wage employment sector for the year 1980, 26.7% were earning up to KSh. 699/- per month while the figure for those earning less than KSh. 1,500 per month was 65.0%. ONly 24.2% of those engaged in wage employment had a monthly income in excess of Ksh.2,000/- per month.

Economists have recommended that 25% of the household income be the optimum expenditure on housing for any household. Thus if a household is disbursing 25% of the household income on housing, it can be considered to be living in affordable housing. An examination of the income levels in wage employment sector in 1980 will establish that 75.8% of the population in this sector would have to spend not more than Shs.500 per month on housing if they were to be adjudged to be living in affordable housing. These low income earners who are evidently the majority, have such low purchasing power that they are constrained to turn to illegal forms of housing provision because the conventional market cannot provide housing for them.

One of the reasons that has caused high population growth in Nairobi and which has in turn aggravated the poor housing situation in the city is rural urban immigration. This phenomenon has been caused by the unproportional industrialisation of Nairobi compared to rural areas. This



Map 3: NAIROBI: POPULATION DENSITIES

Source: King'oriah, G.K.; Policy Impacts on Urba

has made Nairobi attractive as a source of employment opportunities and other income sources. The rate of construction of residential housing has not matched the high increase in population growth (See Table in the next page). This population growth has continued to exert pressure on available housing.

Rural-urban migration is not the only cause of the increase in Nairobi households, high national and urban population growth in Kenya average about 4% per year. This growth rate has burdened investment in housing. It has exerted demands not only on available housing but also on other services such as water, health facilities etc. Since the economy is not growing at the same rate as the population, enough employment opportunities are not being generated for the massive labour force to enable them purchase acceptable housing.

Other factors that have contributed to the acute housing shortage facing Nairobi residents and in particular the low income earners have been identified to include lack of proper security which they could pledge to private financial institutions to obtain mortgage loans with which to improve their housing conditions. While private developers have found housing for low income earners unprofitable hence concentrating on the middle income to

Table 3.2 Estimated increase in Households in Nairobi, Kenya 1971 - 1985

Year	Number of households
1971	136,000
1972	145,300
1973	155,300
1974	166,000
1975	177,400
1976	189,500
1977	202,300
1978	215,600
1979	229,300
1980	243,700
1981	258,600
1982	274,000
1983	290,000
1984	307,000
1985	324,700

Source: Nairobi Housing Needs. Meeting the challenge, Cooper and Lybrand with Institute of Local Government Studies, University of Birmingham 1976, pp.213

high income housing, the public sector has also shifted from the provision of cheaper housing to middle income housing[27]. This phenomenon has led to the prevalent situation whereby housing units that are trully for the low income are not available as no one is developing them. This has relegated low income households to slums and hence the mushrooming of slum areas in Nairobi.

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CHAPTER FOUR

DATA ANALYSIS

Introduction

The main objective of this study was to identify the factors that influence residential location decisions in households of different socio-economic status.

The previous chapters analyse such issues as theories of residential location, sociological aspects influencing residential patterns in urban areas, historical development of Nairobi's residential pattern and the urban housing market with special reference to the housing situation in Nairobi. Each of these topics is analysed with the view of determining to what extent it affects housing location decisions within households; the economic operation of the theories of city structure may affect the shape of Nairobi's residential structure, and with effect to the housing market, residential space is to a large extent structured by the meshing of housing supply and allocation on the one hand and the pattern of housing demand on the other. This chapter undertakes studies and analyses on social economic characteristics of households as well as dwelling characteristics of their present and previously occupied houses.

An individual who wishes to buy land to live upon considers how big the land is, how close to the City Centre, character and racial composition of the neighbourhood, quality of schools in the vicinity, how far away he would be from any relatives he might have in the City and a host of other factors. According to Alonso, the individual merely wishes to maximise his satisfaction by owning and consuming the goods he likes and avoiding those he dislikes. The family therefore spends whatever money it has available in maximising satifaction[1].

In these analyses, the research interviewed households to determine what factors and in what order of importance influenced their decisions with respect to housing choices. In his attempt to analyse the theory of residential location, Evans (1973)[2] assumes that the workplace of all workers in the City is at a single central place, that is, Central Business District (CBD) and that the cost and speed of travel is a function from the CBD. However, this assumption would be a misleading assumption for purposes of this study. Nairobi residents are known to work in many other places besides the CBD. Some work as far as Thika while others work within the city boundaries but outside the CBD. Distance and place of work has therefore been considered as an important factor with respect to housing location decisions.

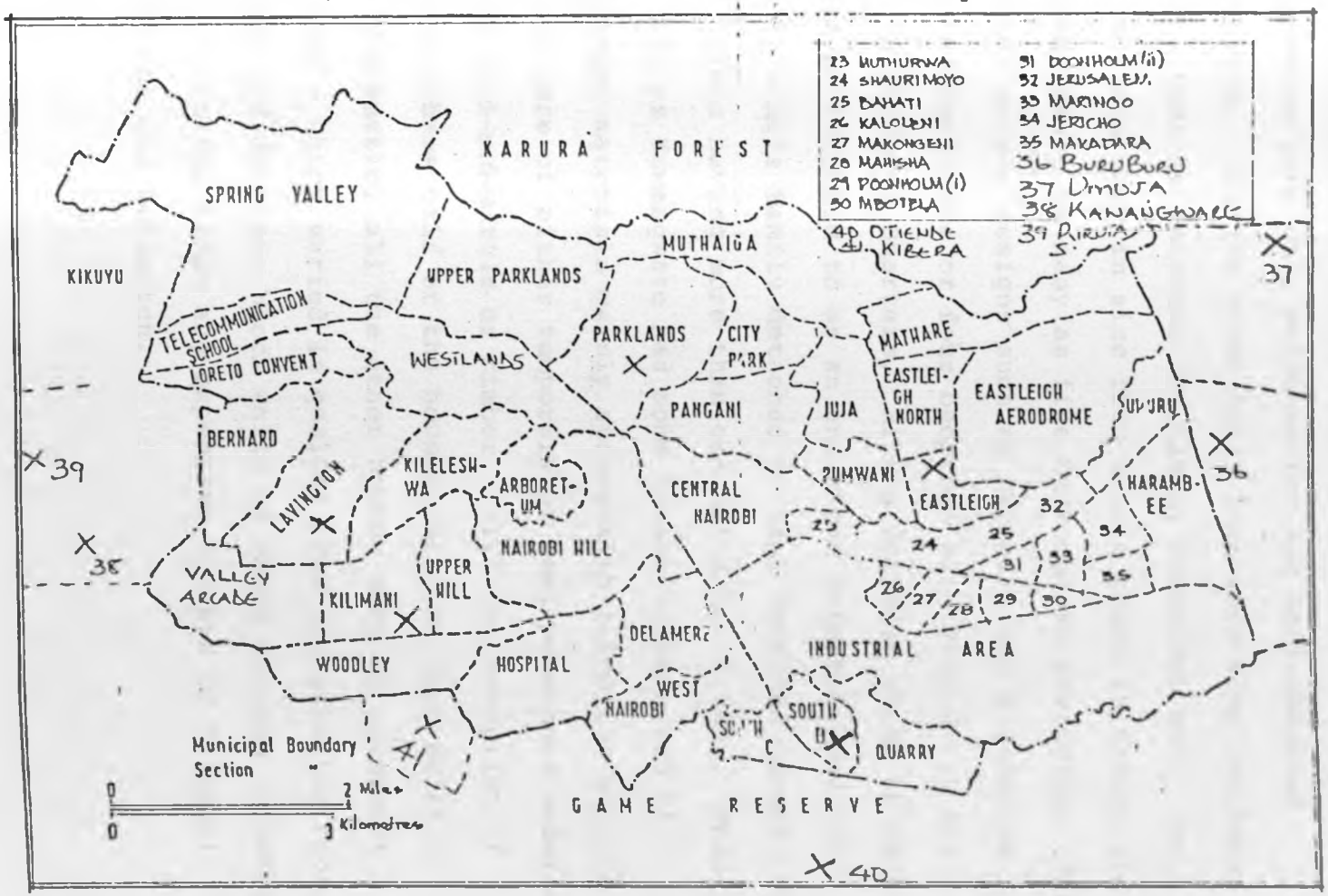
Virirakis[3] suggests that a relationship exists in the degree of separation between workplace and residence which is determined by an equilibrium between the tendency to reduce the residence - to - workplace distance and the tendency to search for a more advantageous place of residence in terms of cost, amenities and environment. Indeed the studies in this chapter analyse these three factors and their respective roles and relative importance in housing location decisions among households of different socio-economic compositions, with the aim of achieving the earlier stated objectives of the study.

House Types

The residential areas surveyed had a variety of house types. However, it was observed while some estates had more than one house type, there were others which had just one house type. Examples of such are Umoja and Otiende Estates whose households interviewed lived in semi-detached and detached bungalows respectively.

Tables 4.1 - 4.3 show the distribution of house types in the case study. The percentages are shown in brackets. Kibera and Kawangware which are very low income residential areas have mainly rows of rooms which vary in sizes as well as some 'Swahili-type' houses with an interior,

MAP No.4 Nairobi, Residential Areas (X indicates study areas)



Source: Ondiege, P.O., Urban Land & Residential Markets Analysis in Kenya (1989).

open courtyard. Other estates such as Buruburu and Plainsview have only maisonnettes and semi-detached bungalows. All the other areas have more than two house types, that is maisonnettes, flats, bungalows etc. The house sizes vary in size from single rooms in Kibera and Kawangware to as many as five bedrooms in Lavington. The typical estate designs such as Buruburu and Plainsview have either three or four bedrooms with Plainsview ones having Servants Quarters. Riruta Satelite which is what would be referred to as an unplanned neighbourhood has mainly single family detached or semi-detached houses, with many plots having more than one building in them. This area as well as Kawangware had some houses constructed of permanent materials mainly stones with tiled roofs while others were of either temporary or semi-permanent materials mainly mud-and-wattle or timber. With the exception of Kibera, where half of the houses surveyed were built of mud-and-wattle, all the other houses were of permanent materials which varied in quality from the asbestos roofing sheets and concrete block walls of Umoja through to natural stone, roofing tiles and expensive finshes of Kilimani, Parklands and Lavington.

Table 4.1 Distribution of house types surveyed in the case studies

	House Type						
	Maisonette	Flat	Detached Bungalow	Semi-D Bungalow	Detached room	Semi-D room	Total
Lavington	4	2	10	1	3	-	20
Kilimani	7	4	2	4	3	-	20
Parklands	5	5	6	4	-	-	20
Eastleigh	3	12	-	-	-	5	20
Buruburu	19	-	-	11	-	-	30
Umoja	-	-	-	30	-	-	30
Otiende	-	-	20	-	-	-	20
Kibera	-	-	8	-	-	12	20
Plainsview	14			6			20
Satelite (Riruta)	2	4	8	4	-	2	20
Kawangware	-	2	2	-	2	14	20
Total	54	29	56	60	8	33	240

Source: Own Field Survey 1987/88

Table 4.2

Distribution of house types in percentages surveyed for this Study

House type	Total No. in case studies	Percentages
Maisonettes	54	22.5
Flats	29	12.08
D-Bungalows	56	23.3
S-D "	60	25
D-Rooms	8	3.3
S-D Rooms	33	13.75
Total	240	100

Source: Own Field Survey 1987/88

Table 4.3 Distribution of House Types Sampled for this Study in Percentages

Area	Maisonnette	Flat	Detached Bungalow	Semi-D Bungalow	Detached Room	Semi-D Room
Lavington	7.4	6.9	17.9	1.7	37.5	0
Kilimani	1.3	13.8	3.6	6.7	37.5	0
Parklands	9.3	17.2	10.7	6.7	0	0
Eastleigh	5.6	41.4	0	0	0	15.2
Buruburu	3.5	0	0	18.3	0	0
Umoja	0	0	0	50	0	0
Otiende	0	0	35.7	0	0	0
Kibera	0	0	14.3	0	0	36.4
Plainsview	26	0	0	10	0	0
Satelite (Riruta)	3.7	13.8	14.3	0	0	6.1
Kawangware	0	6.9	3.6	6.7	25	42.6
Total	100	100	100	100	100	100

Source: Own Field Survey 1987/88

Interviewee

Interviewees were either owner occupants or tenants, in some cases there were some who were employer housed. In cases of employer housing, the interviewee was also asked if they would choose to live in that particular house even if it was not employer provided. Almost all of these answered in

the affirmative. However, a few of these employer housed interviewees felt that they could not afford to pay rents in the areas that the employer houses had been provided, hence they would not live there if they had to pay the rents themselves.

Table 4.4 Distribution of Types of Interviewees

Area	Interviewee		
	Owner Occupier	Tenant	Employer Housing
Lavington	8	8	4
Kilimani	6	10	4
Parklands	9	7	4
Eastleigh	6	14	-
Buruburu	7	20	3
Umoja	12	18	-
Otiende	6	14	-
Kibera	6	14	-
Plainsview	7	8	5
Satelite	9	11	-
Kawangware	7	13	-
Total	83	137	20

Source: Own Field Survey 1987/88

Sizes and Ages of Families

It was quite apparent from the surveys that while some estates were dominated by young families, others had mixtures of both young and old families while others were characterised by older families. By young families are cases where the head of the family is below 40 years and the children are below their teenage years. Older families are cases where the head of the family is above 40 years and the children are within or above teenage.

Another variable of interest was family size. Some areas (especially those within high density areas such as Umoja, Riruta, Eastleigh) had large family sizes, areas such as (Plainsview, Otiende and Buruburu) had medium size families while those in low density areas (such as Lavington, Kilimani and Parklands) had small family sizes. Small family size typically refers to families with 3 or less children, medium family has 4 or less children and large has more than 4 children.

In low density, high income residential areas such as Lavington and Kilimani, interviewees from each of the six 'detached rooms' (these were servant quarters which are rented out and either the servants lived in the main house or there were many detached rooms, enough for the servant/s and for letting). The occupants of these

rooms were in all cases young unmarried women. However, in detached and semi-detached rooms in areas such as Kibera, Kawangware and Satelite, these were occupied by households of varying sizes.

Table 4.5 Family Sizes in Case Studies

	Size								
Area	1	2	3	4	5	6	7	8	'Over 8
Lavington	3	1	3	5	6	1	1	-	-
Kilimani	3	1	2	4	7	2	1	-	-
Parklands	3	-	2	5	6	2	1	1	-
Eastleigh	5	1	-	4	4	3	2	1	-
Buruburu	5	1	6	4	5	6	2	1	-
Umoja	-	5	3	7	9	5	1	-	-
Otiende	-	1	3	1	8	6	1	-	-
Kibera	2	-	1	1	2	5	4	2	3
Plainsview	-	-	1	5	5	3	6	-	-
Satelite	2	3	2	2	3	3	4	1	-
Kwangware	2	1	1	2	5	4	2	1	2

Source: Own Field Survey 1987/88

These family sizes are exclusively of servants. They are those of the nuclear family and in some cases as found in Parklands area among the Asian community elderly parents living with their married children on permanent basis. It can be observed that in most areas studied, many of the households had family sizes of 4 to 6 family members; only Kibera had nine (9) out of the 20 households studied with seven (7) or more family members.

Table 4.6 Family Size Distributed in Percentages (%)

Area	1	2	3	4	5	6	7	8+
Lavington	15	5	15	25	30	5	5	0
Kilimani	15	5	10	20	35	10	5	0
Parklands	15	0	10	25	30	10	5	5
Eastleigh	25	5	0	20	20	15	10	5
Buruburu	17	3	20	13	17	20	7	3
Umoja	0	17	10	23	30	17	3	0
Otiende	0	5	15	5	40	30	5	0
Kibera	10	0	5	5	10	25	20	25
Plainsview	0	0	5	25	25	15	30	0
Satelite	10	15	10	10	15	15	20	5
Kawangware	10	5	5	10	25	20	10	15

Source: Own Field Survey 1987/88

For each of these areas, the mediun family sizes are as shown in the Table below.

Table 4.7 Family Sizes

Area	Median Family Size
Lavington	4
Kilimani	4
Parklands	4
Eastleigh	4
Buruburu	4
Umoja	5
Otiende	5
Kibera	5
Plainsview	5
Satelite	5
Kawangware	5

Source: Own Field Survey 1987/88

The commonest family size in these areas was that of 5 having been the most common in six (6) out of the eleven case studies.

Eastleigh had the highest incidence of single person - families; this being as a result of the many single rooms of bedsitters as well as one bedroomed flats which were more common there than in any other case study. Family sizes

of two (2) as was common in Umoja and Satelite mostly comprised of single women each living with a child as opposed to the more rare case of childless couples.

Ages of Family Members

Ages of family members surveyed ranged from babies of less than one year to elderly people of over sixty (60) years. It was however noted that most families had family heads of under 50 years. This can probably be explained by the fact that most people retire at around 50 years and prefer to settle down in their rural homes instead of staying in the estates while not working. Incidences of family members who were above 50 years of age were to be found mostly in Parklands where some members of the Asian Community were found to be living with their elderly parents.

Table 4.8 shows the distribution of ages of family members in case study.

Table 4.8 Ages of Family Members

Age	0-10	11-20	21-30	31-40	41-50	Over 51
Lavington	32	20	17	20	11	-
Kilimani	30	25	15	16	14	-
Parklands	24	10	14	19	15	18
Eastleigh	35	17	14	20	14	-
Buruburu	43	10	20	24	3	-
Umoja	40	15	16	28	1	-
Otiende	32	25	6	22	15	-
Kibera	56	10	13	20	1	-
Plainsview	50	10	5	31	4	-
Satelite	28	20	20	16	12	4
Kawangware	30	28	14	19	9	-

Source: Own Field Survey 1987/88

It can be observed that while there is an even distribution of family members between the ages of 11 - 20, some areas notably Kibera and Plainsview have a high proportion of children aged between 0 and 10 years. As earlier mentioned, there are hardly any families with members aged above 51 years apart from Parklands and Satelite. The presence of elderly family members in Satelite can be explained by the fact that this is a semi-rural area where most people own land where they were born and brought up. The incidence of old family members in Parklands has already been explained.

Table 4.9 Ages of household heads

Area	Age 25-30	31-35	36-40	41-45	46-50	over 50
Lavington	4	4	5	4	3	-
Kilimani	5	3	4	4	4	-
Parklands	6	6	5	1	2	-
Eastleigh	6	5	5	4	-	-
Buruburu	11	7	9	2	-	-
Umoja	5	15	9	1	-	-
Otiende	1	4	4	11	-	-
Kibera	6	6	7	1	-	-
Plainsview	1	7	10	1	1	-
Satelite	5	4	4	2	1	4
Kawangware	8	3	3	5	1	-

Source: Field Survey

Table 4.10 Ages of household heads in percentages

Area	Age 25-30	31-35	36-40	41-45	46-50	over 50
Lavington	20	20	25	20	15	-
Kilimani	25	15	20	20	20	-
Parklands	30	30	25	5	10	-
Eastleigh	30	25	25	20	-	-
Buruburu	37	23	30	7	3	-
Umoja	17	50	30	3	-	-
Otiende	5	20	20	55	-	-
Kibera	30	30	35	5	-	-
Plainsview	5	35	50	5	5	-
Satelite	25	20	20	10	5	20
Kawangware	40	15	15	25	5	-

Source: Field Survey

The Tables 4.8 - 4.10 reveal that there is considerable variable in the ages of family heads in the different case studies. Kwangware followed by Buruburu had the highest cases of young household heads i.e. 40% and 37% respectively. Otiende and Plainsview had the fewest cases of household heads falling in the 31-35 age bracket which is also relatively young. Indeed half of the households sampled in Umoja had their heads falling within that age bracket. Kawangware and Kilimani had the lowest (5% for each cases of household heads falling within the 31-35 age bracket. Plainsview had the highest number of household heads falling within the 36-40 years of age bracket with half (50%) of all the household heads in this age bracket. Kawangware had the fewest cases of household heads falling within this age bracket with only 15% falling therein. In the 41-45 years age bracket, Otiende had the highest percentage in the entire study. This age bracket was also marked by very low percentages of occurence; e.g. 3% in Umoja, while Parklands, Kibera and Plainsview each revealed 5% of household heads falling within this age bracket with respect to the 46-50 years age bracket. The highest occurence of household heads within this bracket was in Kilimani where 20% of household heads were within this bracket. Other areas namely Eastleigh, Umoja, Otiende and Kibera did not have any household heads

within that age bracket. The other areas had only few household heads in Buruburu to 15% in Lavington. Only Riruta Satelite had cases of household heads of above 50 years. This areas had 20% of all its household heads in the households studied being over 50 years. In no other area was there any household head of over 50 years.

Table 4.11 Distribution of Ages of Household Heads

Age Bracket	Total No. Found	Percentage
25-30	58	24.2
31-35	64	26.7
36-40	65	27
41-45	36	15
46-50	13	5.4
Above 50	4	1.7
Total	240	100

Source: Own Field Survey 1987/88

It is clear from the above table that the age bracket of 36-40 had the highest number of household heads, accounting for 27% of all the household heads. Hoever, the highest proportion of household heads were 40 years and below. In fact 77.9% of all household heads were 25 to 40 years and only 22.1% were above 40 years.

Work Places

Almost all interviewees said that they were employed in Nairobi. However, there were a few isolated cases where some worked outside Nairobi. In Buruburu, there was one interviewee who worked in Thika. Since he has an owner-occupeier, he chose to commute daily to his place of work owing to reasons which he gave as not wanting to move his entire family because he preferred his children going to school in Nairobi. In addition, his wife was employed in Nairobi, thus the interviewee felt that it is easier or more convenient for him to commute daily from Nairobi to Thika as opposed to his wife having to travel daily from Thika to Nairobi and back.

In Umoja there was a case where the household head worked in Mombasa. Owing to the distance between Nairobi and Mombasa, he had had to reside there while his wife and children live in Nairobi. The reasons which the wife (who was the interviewee) gave were similar to those given in the Buruburu case, namely, children's education, wife's employment and in addition they felt that it would be unwise to leave their house in Umoja to a tenant who they felt would not maintain their house the same way as they did.

Finally, there were two cases in Riruta Satelite of heads of households who worked in Kiambu. Both of them commute daily to their places of work and they felt that the

distance between Nairobi and Kiambu was not long enough to warrant moving their families. In addition, both of them owned plots on which their respective families practised subsistence farming. Thus they felt there were too many benefits they derived from owner-occupation of their plots which they would not forego just to be close to their work places.

In no other case study was there an interviewee or household head working outside Nairobi. They all worked in different areas of Nairobi but mainly within the City Centre, Industrial Area, Hurlingham and Westlands.

Education Levels

All the interviewees encountered had some level of formal education. However, this ranged from primary education as was the case with majority of interviewees in areas such as Kibera and Kawangware through to University Education as was common in Lavington, Kilimani and Parklands as well as most other areas.

While Kawangware and Kibera which are basically squatter settlements had almost all the interviewees having primary school education, few having secondary school education and hardly any having college education, most other areas had education levels being well distributed among the

interviewees. In all the other areas only Riruta Satelite had cases of interviewees having only primary school education. On the other hand, postgraduate level of education cases were very few with the exception of Lavington and Plainsview Estates, both of which had 5 cases of each. It was also observed that those interviewees who had postgraduate education in Plainsview were almost all owner-occupiers.

Tables 4.12 and 4.13 show the distribution of education levels within the study area.

Table 4.12 Level of Education Among Interviewees

Area	Education Level				
	Primary	Secondary	College	Univ.	Post.Grad,
Lavington	-	-	4	11	5
Kilimani	-	-	8	9	3
Parklands	-	-	9	9	2
Eastleigh	-	8	10	2	-
Buruburu	-	5	9	16	-
Umoja	-	9	14	7	-
Otiende	-	5	12	3	-
Kibera	11	7	2	-	-
Plainsview	-	2	5	8	5
Satelite	2	10	4	4	-
Kawangware	14	6	-	-	-

Source: Own Field Survey 1987/88

Table 4.13 Education Levels in Percentages

Area	Education Level (%)				
	Primary	Secondary	College	Univ.	Post.Grad
Lavington	0	0	20	55	25
Kilimani	0	0	40	45	15
Parklands	0	0	45	45	10
Kibera	55	35	10	0	0
Plainsview	0	10	25	40	25
Satelite	10	50	20	20	0
Kawangware	70	30	0	0	0
Eastliegh	0	40	50	10	0
Buruburu	0	17	30	53	0
Umoja	0	30	47	23	0
Otiende	0	25	60	15	0

Source: Own Field Survey 1987/88

It can be observed from the above tables that while some study areas had nobody in certain levels of education, other areas had more than half of the household heads interviewed in certain levels of education. Lavington had more than half of the interviewees having University education, in fact 55% of all interviewees fell in this group while the remainder was divided between college and postgraduate levels at 20% and 25% respectively. The incidences of high education levels is commensurate with the high socio-economic levels that are prevalent in Nairobi's prime areas.

In Kilimani, College and University levels had almost equal proportions of interviewees being 40% and 45% respectively and the remaining 15% falling within post-graduate level. In both these areas as well as Parklands which had 45% each of College and University levels and 10% in postgraduate level, there were no interviewees with either primary or secondary levels of education. Eastleigh had half the interviewees 50% being of College level, 40% in Secondary and remaing 10% having University level of education. Buruburu had the highest proportion, that is 53% having University education; there were none in primary level nor postgraduate level.

In Umoja, the highest proportion was 47% in College level while like Buruburu, there were none in the primary and postgraduate levels. Otiende too, had no interviewees in these two categories and had the highest overall (60%) in College level of education. Kibera had more than half the interviewees, 55% in the primary level, only 10% in College level and none in University or Post-graduate level.

Plainsview had one of the highest proportion of interviewees falling in the postgraduate level 25%. However, its highest proportion 40% was in University level and it had none in primary level.

In Satelite, half of the interviewees had secondary level of education 50% while the rest was divided among primary, college and university levels and none in post-graduate level.

Finally, Kawangware recorded the highest percentage of interviewees in one level, that was 70% in primary level. This was the highest proportion obtained in any education level; the remaining 30% was in secondary level. There were none in any other level.

Table 4.14 Distribution of Education Levels Among Interviewees

Education Level	Total No. Found	Percentage
Primary Level	27	11
Secondary Level	52	22
College Level	77	32
University Level	69	29
Postgraduate Level	15	6
Total	240	100

Source: Own Field Survey 1987/88

Table 4.14 reveals that majority of household heads in the study areas had college level of education which accounted for 32% of all the household heads out of all the household heads; 29% had University education (first degree) and 22% had secondary school education. This table also reveals that out of all the household heads in the study area 89% of them had at least secondary school education and above and only 11% had education below secondary school level. Those with education below secondary school were however found in only three study areas namely Kibera, Satelite (Riruta) and Kawangware at the rate of 55%, 10% and 70% of the household heads interviewed respectively. On the other hand, those household heads with postgraduate education were found in four (4) study areas namely Lavington, Kilimani, Parklands and Plainsview at the rate of 25%, 15%, 10% and 25% of the household heads interviewed in those areas respectively.

In respect to education levels in case studies, it was found that if the study areas were to be divided into socio-economic status whereby Lavington, Kilimani and Parklands fall under high; Plainsview under upper middle; Buruburu, Otiende and Umoja under middle; Riruta Satelite under lower middle; and Kibera and Kiwangware under low. It can be observed that education levels correspond with the socio-economic status of households. Households whose heads

have the highest level of education were to be found in the high socio-economic group etc.

Income Levels

Income is a major factor in a household's ability to buy or rent a house the quantity and quality of housing a household will find and be able to occupy.

The population in the case studies composed of households with varying levels of income thus their occupation of different areas demanding different rents and house prices. However, it was noted that most interviewees were reluctant to reveal their income levels and even where the interviewer felt that the interviewee must be earning much more than 10,000/- p.m. probably twice, interviewees in this category adamantly refused to reveal the specific figures and the only answer obtained was 'over 10,000/-' which was adopted to classifying those interviewees earning any amount more than 10,000/- p.m. due to the said reluctance. However, most interviewees earning less than this amount, especially those in the very low income brackets as was the case in Kibera and Kawangware had no problems responding to the question of income; in fact they did so readily.

Area	Income Bracket										
	1 0-1000	2 1001-1000	3 2001-2000	4 3001-4000	5 4001-5000	6 5001-6000	7 6001-7000	8 7001-8000	9 8001-9000	10 9001-10000	11 Over 10000
Lavington	-	-	-	-	-	-	1	1	1	-	17
Kilimani	-	-	-	1	-	-	2	1	2	1	13
Parklands	-	-	-	-	1	-	-	1	1	-	17
Eastleigh	-	-	-	-	-	4	7	5	3	-	1
Buruburu	-	-	-	-	2	3	2	4	2	5	12
Umoja	-	-	-	-	3	5	7	7	8	-	-
Otiende	-	-	-	-	-	-	5	6	4	3	2
Kibera	10	6	2	1	1	-	-	-	-	-	-
Plainsview	-	-	-	-	-	-	-	1	4	7	8
Satelite	-	-	2	3	4	-	5	3	1	1	1
Kawangware	8	9	3	-	-	-	-	-	-	-	-

Source: Field Survey

Table 4.15 Income levels in case studies

Table 4.16 Income levels in Percentages

Area	Income Bracket (1-1)										
	1	2	3	4	5	6	7	8	9	10	11
Lavington	0	0	0	0	0	0	5	5	5	0	85
Kilimani	0	0	0	5	0	0	10	5	10	5	65
Parklands	0	0	0	0	5	0	0	5	5	0	85
Eastleigh	0	0	0	0	0	25	35	25	15	-	5
Buruburu	0	0	0	0	67	10	67	13	67	17	40
Umoja	0	0	0	0	10	17	23	23	27	-	-
Otiende	0	0	0	0	0	0	25	30	20	15	10
Kibera	50	30	10	5	5	0	0	0	0	0	0
Plainsview	0	0	0	0	0	0	0	5	20	35	40
Satelite	0	0	10	15	20	0	25	15	5	5	5
Kawangware	40	45	15	0	0	0	0	0	0	0	0

Source: Field Survey

The economic status of the dwellers of each of these study areas is apparent by a glance at the above tables. Almost the entire proportion of households interviewed in Lavington had a monthly income falling in the highest income bracket i.e. 10,000/- per month. This income bracket (11) covered 85% of the total population sampled in Lavington, the remaining 15% were divided equally between brackets 7, 8 and 9 at 5% each. In

Kilimani and Parklands, the highest proportions also fell in the highest income bracket (11) at 65% and 85% respectively. The lowest income bracket for these two areas were 4 and 5 respectively. However, in Kilimani, 95% of the household heads sampled had income of over 6,000/- p.m. while 95% of those in Parklands had income of over 7,000/- p.m. The remaining 5% in Parklands had income between 4,000 - 5,000/- p.m. In Eastleigh 95% of the households surveyed had a monthly income of between 5,000/- and 9,000/- p.m. and the remaining 5% had income of over 10,000/- p.m. In Buruburu, the highest proportion in any single income bracket was 40% which had a monthly income of over 10,000/-, the remaining 60% was distributed among households with between 4,000/- to 10,000/- p.m. income. In Umoja, the entire population sampled had income falling between 4,001/- p.m. and 9,000/- p.m. In Otiende, the households with the least monthly income were those in the 6,001 - 7,000/- p.m. income bracket. 10% of the households sampled in this area had income of over 10,000/- p.m.

Half of the households sampled in Kibera had income falling in the lowest income bracket, that is, 0-1000/- p.m. 30% fell in the second income bracket i.e. 1001 - 2000/- p.m. while the remaining 20% had income ranging from 2,001 to 5,000/- p.m. Kawangware had an income distribution similar to that of Kibera in that 85% of the household sampled had income of

between 0 and 2,000/- p.m. while the remaining 15% were in the income bracket 2,001 - 3,000/- p.m. In other words, no household sampled in Kawangware had income of over 3,000/- p.m. In Plainsview, the lowest income was in the income bracket of 7,000 - 8,000/- p.m.. This bracket represented only 5% of the households sampled while the remaining 95% had income of over 8,000/- p.m. with 40% of them having income of over 10,000/- p.m. In Riruta Satelite, 95% of the households sampled had income of between 2,001/- p.m. to 10,000/- p.m. where the remaining 5% had income of over 10,000/- p.m.

However, these figures represent the monthly income of the household heads. However, in majority of the study areas, most households had both the wife and husband working. Lavington, Kilimani and Parklands each had 15% of the households belonging to single people; in the remaining 85% of the households, there were working wives thus household incomes in all these cases were raised to over '10,000/-' p.m. as earlier mentioned. Almost all the households declined to specify income of over 10,000/- p.m.

In Eastleigh, 25% of the households were single; 30% had housewives i.e. non-working wives and the remaining 45% households had working wives who increased the monthly family income to 8,000/- p.m. and above. In Buruburu, 17%

of the households were single; 15% had non-working wives; the remaining 68% had working wives who raised the family income to 9,000/- p.m. and above. In Umoja, 30% of the households had non-working wives, the remaining 70% who were working raised their family incomes to a minimum of 7,000/- p.m. In Otiende, and Plainsview, all the households sampled had working wives and the minimum family income in these areas was 8,000/- p.m. and 9,000/- p.m. respectively.

None of the households in Kibera and Kawangware had working wives; thus their income remained unchanged. In Riruta Satelite, 40% of the households had working wives who raised the family incomes to a minimum of 6,000/- p.m.

Racial/Ethnic Backgrounds

Most households sampled in the case studies revealed Africans of various ethnic backgrounds being almost evenly distributed. These ethnic groups included Kikuyus, Luos, Luhias, Kambas, Merus, Kalenjins, Kisiis, Embus, Taitas, etc.

However, households of non-African origin were only found in certain case studies. For example, households of European origin were only encountered in Lavington and Kilimani while those of Asian origin were mainly concentrated in Parklands areas.

Even among Africans, there were cases where certain groups were found in specific areas. For example, while Boranas were mainly concentrated in Eastleigh constituting about 35% of households sampled; about 35% of households sampled Nubis were concentrated in Kibera constituting about 30% of the households sampled. It was also noted that households belonging to those two ethnic groups tended to be close to each other.

It was also observed that some areas lacked or had very few households belonging to certain ethnic groups. For example, although Kikuyu is the majority ethnic group in Kenya, only one out of the 20 households sampled in Kibera were Kikuyu. This represents only 5% of the households sampled in that area compared to the 60% comprising of Nubis and Luos (30% each) in the area.

It was observed that Whites were only found in Lavington and Kilimani and not in any of the other areas. These two areas are mainly occupied by elite Africans owing to the high rents and house prices prevailing in these areas. This is especially so in Lavington where rents go up to over 30,000/- p.m. Lavington has got prescribed minimum plot size being 3/4 acre and in Kilimani minimum plot sizes are ½ acre or 1/4 acre when sewered. They are both allowed ground coverage of $33\frac{1}{3}\%$. Residents of Asian origin were

Area	Race/Ethnic Group													
	Kikuyu	Luo	Luhyia	Maasai	Kamba	Kalenjin	Meru	Kisii	Taita	Embu	Borana	Nubi	Whites	Asian
Lavington	5	2	2	-	2	1	1	1	-	1	-	-	4	1
Kilimani	7	2	2	-	2	2	2	1	-	-	-	2	-	-
Parklands	3	3	2	-	3	-	-	-	-	1	-	-	-	8
Eastleigh	6	1	1	-	-	-	2	;	2	-	7	-	-	-
Buruburu	10	9	2	-	5	-	1	3	-	-	-	-	-	-
Umoja	14	4	1	1	2	-	2	1	4	-	1	-	-	-
Otiende	6	3	2	1	2	2	1	-	2	1	-	-	-	-
Kibera	1	6	3	-	2	-	-	-	-	-	2	6	-	-
Plainsview	5	5	2	-	2	2	2	-	1	1	-	-	-	-
Satelite	12	2	2	-	-	2	1	1	-	1	-	-	-	-
Kawangware	3	4	1	1	1	-	-	1	-	-	6	3	-	-

Source: Field Survey

Table 4.17 Distribution of race/ethnic groups in case studies

Area	Race/Ethnic Group													
	Kikuyu	Luo	Luhyia	Maasai	Kamba	Kalenjin	Meru	Kisii	Taita	Embu	Borana	Nubi	Whites	Asian
Lavington	25	10	10	0	10	5	5	5	0	5	0	0	20	5
Kilimani	35	10	10	0	10	10	10	5	0	0	0	0	10	0
Parklands	15	15	10	0	15	0	0	0	0	5	0	0	0	40
Eastleigh	30	5	5	0	0	0	10	5	10	0	35	0	0	0
Buruburu	33.3	30	6.7	0	16.7	0	3.3	10	0	0	0	0	0	0
Umoja	47.7	13.3	3.3	3.3	6.7	0	6.7	3.3	13.3	0	3.3	0	0	0
Otiende	30	15	10	5	10	10	5	0	10	5	0	0	0	0
Kibera	5	35	15	0	10	0	0	0	0	0	10	30	0	0
Plainsview	25	25	10	0	10	10	10	0	5	5	0	0	0	0
Satelite	60	10	5	0	0	10	5	5	0	5	0	0	0	0
Kawangware	15	20	5	5	5	0	0	5	0	0	30	15	0	0

Source: Field Survey

Table 4.18 Distribution of ethnic groups/races in percentages

mainly to be found in Parklands area whose minimum plot sizes and ground coverage is similar to that of Kilimani. These plot sizes can be compared to those of other areas e.g. Buruburu and Umoja both of which have minimum plot sizes being $\frac{1}{20}$th of an acre. In unplanned settlements such as in Kibera and Kawangware, each owners plot is just that which is occupied by his house, which is normally a room or two.

Residential Mobility

The study of residential mobility started by finding out the duration of time that each of the households surveyed had lived in Nairobi. The results are given in the two tables below.

These preceeding tables reveal that 70% of the households surveyed in Lavington had been in Nairobi for less than 16years while the remaining 30% had been in Nairobi for periods ranging between 16 - 30 years. None of the households studied in Lavington had lived in Nairobi for more than 30 years.

In Kilimani, 80% of the households studies had lived in Nairobi for durations of between 1-20 years. Only 20% had lived in Nairobi for periods ranging between 21-30 years and none had lived in Nairobi for more than 30 years.

Table 4.19 Duration lived in Nairobi (in years)

Area	1-5	6-10	11-15	15-20	21-25	25-30	over 30
Lavington	4	6	4	3	2	1	-
Kilimani	4	5	4	3	1	3	-
Parklands	1	4	4	1	-	4	6
Eastleigh	1	4	5	4	2	3	1
Buruburu	6	7	9	2	2	1	3
Umoja	1	15	10	4	-	-	-
Otiende	4	5	3	3	3	2	-
Kibera	2	6	5	5	2	-	-
Plainsview	2	3	6	4	1	2	2
Satelite	6	4	3	3	-	2	2
Kawangware	6	5	1	1	1	1	5

Source: Field Survey

Table 4.20 Duration lived in Nairobi in Years in Percentages

	Years						
Area	1-5	6-10	11-15	15-20	21-25	25-30	over 30
Lavington	20	30	20	15	10	5	0
Kilimani	20	25	20	15	5	15	0
Parklands	5	20	20	5	0	20	0
Eastleigh	5	20	25	20	10	15	5
Buruburu	20	23	30	7	7	3	10
Umoja	3	50	33	13	0	0	0
Otiende	20	25	14	15	15	10	0
Kibera	10	30	25	25	10	0	0
Plainsview	10	15	30	20	5	10	10
Satelite	30	20	15	15	-	10	10
Kawangware	30	25	5	5	5	5	25

In Parklands, half of the households studied had lived in Nairobi for periods ranging between 1 - 20 years while the remaining half (50%) had lived for periods ranging from 20 to over 30 years. Parklands had the highest incident of households who had lived in Nairobi for over 30 years (30%).

In Eastleigh, 65% fell in the ranges of between 6 - 20 years while the remaining 35% fell in the other ranges with only 1 household (5%) having lived in Nairobi for over 30 years.

In Buruburu, over 70% of the surveyed households had lived in Nairobi for periods of upto 15 years only with only the remaining less than 30% having lived in Nairobi for longer periods. This included the 10% who had lived in Nairobi for over 30 years.

Umoja had the highest percentage of households falling in one duration range that of 6 - 10 years which had 50% of the households surveyed in that area. However, the entire population studied had lived in Nairobi for periods of not more than 20 years.

Otiende had an almost even distribution of its population among the duration ranges; the highest being the 6-10 years range with none of the households having resided in Nairobi for over 30 years.

In Kibera, 80% of the population studied had resided in Nairobi for periods ranging between 6 - 20 years and had none of the households exceeding the 25 years duration.

Plainsview, Riruta and Kawangware had 30% being the highest incident of duration lived within the 11-15, 1-5 and 1-5 years ranges respectively. Plainsview and Riruta Satelite each had 10% of the households surveyed having lived in Nairobi for over 30 years while Kawangware had 25% of the household surveyed falling in that category.

The total number of moves (change of residence) made by the households sampled in the study were analysed and this showed that the mean number of moves was 3 per household. For the purpose of this study, therefore, for each case study, only 3 moves will be considered for each household. Where a household had had more than 3 moves, only the last three (before the current residence) are considered. There were cases where households had not changed or moved from their first house or had only had one move. However, this was observed mainly in young households or where the household had been in Nairobi for a relatively short period of time.

The table below shows the number of moves made by each household in each case study in relation to the duration of time lived in Nairobi.

Table 4.21 Number of moves made by each household in each case study

Area	Moves	No. of households	%age	Time range lived in Nairobi (years)
Lavington	0	6	30	3 - 8
	1	4	20	6 - 20
	2	6	20	10 - 25
	3	4	20	15 - 25
Kilimani	0	1	5	3
	1	9	45	3 - 14
	3	3	15	10 - 30
Parklands	0	0	0	0
	1	7	35	4 - 30
	2	10	50	6 - 40
	3	3	15	12 - 40
Eastleigh	0	1	5	4
	1	13	65	6 - 25
	2	4	20	12 - 28
	3	2	10	28 & 35
Buruburu	0	0	0	0
	1	9	30	5 - 30
	2	12	40	5 - 30
	3	9	30	3 - 30
Umoja	0	1	3	6
	1	13	43	6 - 15
	2	16	53	5 - 20
	3	0	0	0
Otiende	0	4	20	4 - 10
	1	8	40	5 - 20
	2	7	35	10 - 25
	3	1	5	25
Kibera	0	5	25	2 - 15
	1	12	60	6 - 24
	2	3	15	14 - 21
	3	0	0	0
Plainsview	0	2	10	4 - 5
	1	8	40	6 - 18
	2	9	45	15 - 30
	3	1	5	36
Satelite	0	6	30	1 - 30+
	1	10	50	5 - 30
	2	4	20	2 - 20
	3	0	0	0
Kawangware	0	5	25	1 - 40
	1	15	75	3 - 50+

A number of observations can be made from the above table. Case studies whose occupiers are largely high income earners had higher mobility rates. These areas include Lavington, Kilimani and Parklands which had 85%, 80% and 85% of the households sampled having had at least two moves respectively. High mobility rates were also present in low middle to upper middle income areas with Eastleigh, Buruburu, Umoja and Otiende having 85%, 70%, 100% and 95% of their occupiers (respectively) having had at least 2 moves. Plainsview which is a middle to upper middle income housing estate had 95% of its interviewees having made 2 moves.

Interviewees in very low to low income areas had made relatively fewer moves. Out of those interviewed in Kibera, 85% had made only one or no moves; the entire population interviewed in Kawangware had made only one or no move at all. The reasons for these variations in mobility with respect to income groups will be looked at in the analysis for reasons accounting for residential mobility.

It was also observed that in the high income residential case studies, there was a direct relationship between the period of time that a household had lived in Nairobi and the number of moves made, notably, in these areas, households who had made one or no move had lived in Nairobi for relatively shorter periods of time compared to

those that had made 2 or more moves. However, this incident was different in lower income residential case studies where it was observed that the period of time lived in Nairobi had no bearing on the number of moves that households had made. In Kawangware, a very low income residential area, despite the fact that the entire population sampled had lived in Nairobi for periods of upto and above 50 years, 75% of this sample had made only one move and the remaining 25% had made no move at all. This incident was also repeated in Kibera and to a smaller extent in Riruta Satelite where very few moves had been made irrespective of the periods lived in Nairobi. Low income residential areas were, therefore, observed to have lower mobility rates notwithstanding the length of time that households had lived in Nairobi.

Cases of third moves were observed mainly in middle and high income areas; the highest incident being in Buruburu 30% and the high income areas of Lavington, Kilimani and Parklands having 20%, 15% and 15% respectively. Incidences of third moves were insignificantly low in Eastleigh, Otiende, and Plainsview while they were altogether absent in Umoja, Kibera, Riruta Satelite and Kawangware.

Reasons for Mobility

In the analysis of why households moved from one house or area to another, the households that were occupying

their first house since moving to Nairobi, that is, those that had not changed residences were left out. This is for the obvious reasons that the factors accounting for residential mobility, which constitute an important aspect of this study were not applicable to them. However, these households will be examined at a later section when reasons for occupying current dwellings are analysed.

In analysing residential mobility, the study has considered each movement made by each household so as to take into account any peculiarity in the housing conditions such as area lived in, type of house occupied, rent paid and tenure type as well as the reasons given for moving with respect to each movement made. The data collected was therefore analysed with respect to the first, second and third house occupied as the case might be before moving into current house. Reasons for moving into current houses/ dwellings will be analysed separately.

The purpose of this part of the study was to examine the importance of various factors such as marriage, jobs, home ownership and improvement of living conditions as determinants of housing choice for residents of each of the case studies.

In Lavington, 14 out of the 20 households sampled had moved at least once. There was no similarity with

respect to the localities that these households had lived in before. In fact, none of the households studied had lived in a similar area with another. With respect to the first houses occupied by those who had made at least one move in Lavington case study, no particular house type stood out as dominant, as many households had occupied semi-detached bungalows as had occupied flats with each of these house types having three households while as many households had occupied detached bungalows as had occupied maisonnettes.

In Kilimani, 10 out of the 20 households sampled i.e. 95% had moved at least once since coming to Nairobi. It was noted that households had previously occupied houses located in middle to high income areas. The dominant house type occupied by these households was maisonnettes which accounted for 45% of all the first houses occupied.

In Parklands, all the households interviewed had moved at least once since coming to Nairobi. It was observed that a large number of these households had lived in the Eastleigh area in such estates as Ngara, Pangani and Eastleigh. The number of households who had lived in these areas accounted for 40% of all households interviewed and semi-detached bungalows being the dominant house type in previous houses and accounting for 60% of the house types occupied.

In Eastleigh, 19 out of the 20 households interviewed had occupied previous houses. It was noted that like Parklands, many of these households had also lived in nearby areas such as Ngara and Pangani. This incidence accounts for 50% of the areas previously occupied. However, no dominant house type was observed in these previous occupancies.

In Buruburu, all the households interviewed had moved at least once since coming to Nairobi. There was however no dominance in either the areas nor housetypes previously occupied.

In Umoja, 97% of the households interviewed had moved at least once. It was observed that the first moves were generally from other low income residential areas. There were three cases of households who had previously occupied single rooms; otherise there was no dominant house type.

In Otiende, 80% of the households had moved at least once. These first moves were observed to have been from mainly middle income residential areas with mixed house types.

In Kibera where 75% of the households had moved at least once, it was observed that the first moves had been mainly from other very low income areas. It was also

Also observed that these other areas had been relatively further away from the city compared to Kibera. All the house types previously occupied had been single rooms.

In Plainsview, 90% of the households had moved at least once. It was observed that they had moved mainly from middle income areas with mixed house types.

In Riruta Satelite, 70% of the households had moved from their first houses. In this area, it was observed that these households had moved from other peri-urban areas such as Kikuyu, Dagoretii, Kabete, etc. Such cases accounted for over 50% of the cases. There was no dominant house type in previous houses occupied.

In Kawangware 75% of households had moved at least once; out of these, in the same area. The rest had previously lived in either peri-urban areas or other very low income residential areas. Out of all previous houses occupied, single rooms accounted for over 70% of house types.

Rents in First Houses

There was a wide disparity in rents paid for the first houses occupied by interviewees. The reason for this was mainly due to such factors as the households income level,

areas lived, size and state of house that had been occupied etc.

Table 4.22 Monthly Rents paid in First Houses

Area	Rent/Month (in KShs.)						
	No Rent	Less than 1000	1001 to 2000	2001 to 3000	3001 to 4000	4001 to 5000	Over 5000
Lavington	43%	7%	29%	0%	14%	0%	7%
Kilimani	42%	0%	42%	0%	0%	0%	16%
Parklands	75%	5%	15%	0%	0%	0%	0%
Eastleigh	58%	5%	20%	16%	0%	0%	0%
Buruburu	30%	27%	37%	6%	0%	0%	0%
Umoja	34%	52%	10%	0%	0%	0%	0%
Otiende	50%	0%	38%	12%	0%	0%	0%
Kibera	47%	53%	0%	0%	0%	0%	0%
Plainsview	42%	0%	21%	16%	5%	5%	11%
Satelite	6.6%	53%	13%	6.6%	6.6%	6.6%	6.6%
Kawangware	47%	53%	0%	0%	0%	0%	0%

Source: Own Field Survey 1987/88

From the above table, it can be observed that in most of the case studies, majority of the households interviewed had not paid any rent in the first houses occupied. For almost all the households who had not paid any rent in their first houses, these houses had belonged to either their parents or they had lived with other relatives hence non-payment of rent. Cases of non-payment of rent being occasioned by the house being employer provided were found in Buruburu, Otiende, Eastleigh, Plainsview, Kilimani at the rate of 33%, 38%, 9%, 50% and 25% of those who had not paid any rent respectively.

For all the households who had paid rent (tenants) there were no cases of shared tenancies where households had coupled up with other households hence shared the rents between them. These cases were found in all the case studies.

It can be observed from the table that rents that households had paid had been generally low, with few households having paid over KShs.2,000/- per month for the first houses that they had occupied. In very low income areas such as Kibera and Kawangware, all the households had either paid no rents in their previous houses or had paid rents much lower than KShs.1,000/- per month.

In the first houses that interviewees had occupied, there were hardly any cases of rents exceeding KShs.3,000/- per month. Such cases were only found by residents living in Lavington: 21%, Kilimani: 16%, Umoja: 4%, Plainsview: 21%, and Riruta Satelite: 20%.

Reasons for Mobility (1)

Various factors were given as accounting or being responsible for households having moved from their first houses.

The table in the next page lists these factors as well as their rate of occurence in each case study. It should be noted here that the factors are given as a percentage of the number of households who gave them as reasons for moving with respect to the number of households who had moved from their first houses in each case study.

It was observed that there was variation in reasons for movement from first houses that households had occupied. However, only a few of these reasons were important in their role as movement stimulants, namely these reasons are marriage, home ownership, independence, job changes and size of houses.

	Inde-pendence	Marriage	change of employment	parents moved	bought/ build house	small house	dislike neighbour-hood	Distance	High rent	Divorce	Security
Lavington	43	14	7	0	14	14	0	7	0	0	0
Kilimani	16	16	21	0	10	10	16	10	0	0	0
Parklands	35	20	5	15	15	5	5	0	0	0	0
Eastleigh	26	26	5	0	11	26	0	5	0	0	0
Buruburu	13	13	17	0	3	47	0	3	3	0	0
Umoja	10	31	0	0	27	17	3	3	6	3	0
Otiende	12.5	37	25	0	12.5	0	0	12.5	0	0	0
Kibera	27	0	7	0	40	13	0	13	0	0	0
Plainsview	17	17	33	0	11	5	-	5	11	-	-
Satelite	7	-	-	-	43	7	14	21	7	0	-
Kawangware	27	0	0	0	46	0	0	20	0	0	7

Source: Field Survey

Table 4.23 Reasons for first moves

Independence was responsible for majority of movements from first houses by residents of Lavington, Parklands and Eastleigh having accounted for 43%, 35% and 26% of all movement from first houses respectively. In all these cases of independence - related movements, the households had been living with their parents, relatives, or in shared rental houses. By independence, they referred to freedom that goes along with living on ones own.

Marriage was the other important reason given as having stimulated movement from first houses. It was the most prominent reason for movement from first houses for households now living in Otiende, Umoja, and Eastleigh having accounted for 37%, 31% and 26% in these case studies respectively. Where movement had been stimulated by marriage, the affected households had been like in the case for independence-related movements,living with parents, relatives or sharing rented houses prior to the marriage. In some cases, they had been living in houses that they felt were too small to accommodate an enlarged family; in either case, there was need to move out upon marriage.

Home ownership was also of overwhelming importance as a reason for movement from first houses. In all but one case study, home ownership accounted for at least over 10% of the reasons given for first movements. This factor was

similar in importance to independence which had contributed to first movements of households in all the case studies. Home ownership was the most important factor stimulating first movements for households now living in Kibera, Riruta Satelite and Kawangware having accounted for 40%, 43% and 46% of first movements in these case studies respectively. In Umoja area, it was a close second to marriage having accounted for 27% of these movements compared to 31% movements stimulated by marriage.

It was observed that in Kibera, Riruta Satelite and Kawangware where home ownership had been the factor responsible for movements from first houses, these homes had been acquired through construction of individual houses in contrast to most other areas where homes had been acquired through purchasing of already built houses.

While size of house had contributed to the highest number of movements from first houses for households now living in Buruburu, this factor (small house) had equalled independence and marriage in importance as mobility factors for Eastleigh households each having accounted for 26% of movements from first houses. However, in Buruburu case study, small houses had accounted for an overwhelming 47% of movements from houses first occupied by interviewees.

Job-related movements from first houses occupied by interviewees in Kilimani and Plainsview case studies were of importance. In both of these areas, change of job had occasioned the highest number of movements from their first houses; 21% of households in Plainsview areas had moved from their first houses for job-related reasons. These reasons involved cases where a household head moved from a job where the employer had provided housing hence he/she had to vacate the house on terminating employment with that employer. On the other hand, there were cases where household heads obtained jobs where employer housing was provided hence movement into that house. There were also cases where household heads had moved from one employer provided house to another upon change of jobs.

The above analysis is only of factors that had been dominant in stimulation of movements from houses that interviewees had occupied upon coming to Nairobi. However, there were other reasons which though insignificant with respect to the number of movements that they had stimulated had all the same played a role in residential mobility with respect to these first houses occupied.

The most important of these less significant mobility factors had stimulated movements in small numbers, the highest being 21% of households now living in Riruta

Satelite. It had however acted as a movement stimulant in all but one case study i.e. Parklands. Though few in numbers, all these households had moved from their first houses because of having to travel long distances to places of employment.

Movement due to dislike of neighbourhood in first houses had occurred in 4 out of the 11 areas studied. Though this factor had stimulated a negligible 5 and 3% of movements for households now in Parklands and Umoja respectively, it had stimulated a significant 16% and 14% of movements for households now in Kilimani and Riruta Satelite respectively.

In another 4 out of the 11 areas studied, an insignificant low number of households had moved out of their first houses due to the high rent that had been demanded.

Divorce and security reasons had caused movements from first houses for households in Umoja and Kawangware at the rate of 3 and 7% respectively.

From this analysis of reasons that stimulated respondents to move out of their first houses the hypothesis of the study is partly confirmed, that other social and economic factors besides place of work and affordability

influence the choice of residential area in Nairobi. In this analysis the social factor of independence comes out as a reason not for choice of residential area but as a stimulant for mobility. Marriage and home ownership also play important roles in stimulating residential mobility. The role played by distance to place of work in residential mobility is insignificant. However, home ownership which is an indicator of affordability plays an important role in stimulating movement. However, its role is not as significant as that played by independence and marriage. Although home ownership is important, there are other more important factors.

Second Houses Occupied and Moved Out of:

Out of the households studied in Lavington case study, 10 of them had occupied and moved out of their second house since coming to Nairobi, that is, 10 households had moved at least twice. The areas that these households had lived in after moving from their first houses were as varied as those occupied in the first houses, that is, there was no similarity with respect to the areas that these households had moved into. Like in first houses occupied, no housetype was overwhelmingly dominant, however, 40% of these households had moved into maisonnettes while the rest had moved into flats, semi-detached bungalows and single room at the ratio of 3:2:1 or 30%, 20% and 10% respectively.

In Kilimani, there were also 10 households who had occupied and moved out of their second houses since coming to Nairobi. These second houses had been mainly in middle income areas such as Nairobi South, Nairobi West, Buruburu etc. Like in previous house types occupied by these households, the dominant house type was maisonettes, accounting for 60% of these second houses. The remaining 40% had been either flats or semi-detached bungalows (20% of each).

65% of the households studied in Parklands had occupied a second house. 30% of these households had had their second houses located in the neighbouring Eastleigh-Pangani area. The remaining 70% had been in various and diverse parts of Nairobi but notably in middle income areas. Over 50% of the house types had been maisonnettes.

Only 35% of households studied in Eastleigh had occupied a second house. These houses had been in diverse parts of Nairobi but notably low to middle income areas. The house types had been either maisonnettes or flats at the ratio of 4:3 or 57% and 43% respectively.

About 67% of households in Buruburu had moved twice. The houses occupied showed the same characteristics as those occupied in the first houses by showing no dominance in either locality or house type.

In Umoja, the households who had moved out of their second houses comprised 53% of the households studied. It was observed that these second houses had almost all been in low income areas with the exception of very few being in lower middle income areas. Although there was no dominant house type the previous incident of 3 households occupying single rooms still prevailed.

Although only 40% of households studied in Otiende had moved into and out of second houses, these second houses were observed to have similar characteristics as the first ones in that they had all been in middle income areas and had no dominant house types.

Kibera had only 15% of the households studied having occupied and moved out of a second house, like in the previous first houses cases, these houses had been located in very low income areas, in fact 2 of these 3 houses had been located in Kawangware while the remaining one had been located in Mathare.

In Plainsview the number of these households who had occupied at least a second house made up 55% of the total number of households studied. The second houses had been located in middle to upper income areas with over 90% of the houses being maisonnettes and the remainder flats.

In Satelite those households that had occupied and moved out of a second house comprised only 20% of the households studied. These houses had been in diverse areas with only one of them having been in the peri-urban area of Kabete, the house types had been 50% maisonnettes and 50% semi-detached bungalows. Kawangware was the only case study where none of the residents had moved twice.

Rents in 2nd Houses

Like was the case with the first houses occupied, there was a wide disparity in the rents paid for the second houses occupied by interviewees.

Table 4.24 shows how many interviewees (in percentages) in each case study had paid what rent for their second houses.

Table 4.24 Monthly Rents Paid in Second Houses

Area	Rent/Month (KShs.)						
	No Rent	Less than or 1000	1001-2000	2001-3000	3001-4000	4001-5000	Over 5000
Lavington	0	10	50	30	10	0	0
Kilimani	10	10	40	30	10	0	0
Parklands	23	15	46	15	0	0	0
Eastleigh	14	14	57	14	0	0	0
Buruburu	10	10	70	5	0	0	0
Umoja	6	75	6	13	0	0	0
Otiende	25	12.5	12.5	12.5	12.5	0	0
Kibera	0	100	0	0	0	0	0
Plainsview	18	0	9	27	27	0	0
[illegible]	0	25	50	0	25	0	0

The most notable feature observable from Table 4.24 is that unlike in cases of the first houses occupied by interviewees, cases of non-rent payment had either been very low or non-existent. Where there had been cases of non-rent payment, this had been as a result of employer provided housing as opposed to occupation of parents' or relatives' houses as had been in the case with first houses.

There had been variations in rental patterns in the second houses occupied by interviewees in different case studies. In Lavington, the levels of rents that had been paid for second houses occupied had not been as high as in the first houses occupied. While in the first houses three of the households sampled had paid rents of over 3,000/- p.m., in the second houses, there had been only one case of household paying more than 3,000/- p.m. This owed to the fact that two of the households who had paid high rents in the first houses had bought their own houses. While there had been no cases of rents having been very high in second houses, the percentage of those who had paid rents of between 1,000 - 3000/- p.m. had been 80% compared to 29% in the first houses. This means that households had paid more for their second houses than they had previously paid in their first houses.

In Kilimani, 2nd houses rents had been relatively higher than in first houses rents with 40% of interviewees having paid rents between 2,000 - 4,000/- p.m. while in first houses, 84% had paid rents of upto only 2,000/- p.m. However, the 16% which had paid rents of over 5,000/- p.m. for first house did not feature in second houses for reasons of owner occupation, i.e. those who had paid rents of over 5,000/- p.m. for their first houses had moved into owner occupied houses.

In Parklands, Eastleigh, Buruburu and Umoja case studies, there had been like in all cases, a drastic reduction, of non rent payment in second houses occupied and the entire numbers of households had paid rents of not more than 3,000/- p.m. with the exception of Buruburu where 5% had paid over 5,000/- p.m. for the second houses occupied.

Interviewees in Otiende case study had also paid higher rents for 2nd houses occupied in that while there had been 50% of interviewees falling in the 1,000 - 3,000/- p.m. rent brackets, with 3,000/- p.m. being the highest rent paid, 37.5% of those who had occupied and moved out of 2nd houses had paid rents in the 3,000 - 4,000/- p.m. rent bracket.

In Kibera, all the households interviewed had paid rents of less than 1,000/- p.m. for their second houses; the

only difference exhibited in this case study with respect to first and second houses occupied was the absence of non-rent payment in second houses.

Plainsview case study had the highest number of residents having paid more than 3,000/- p.m. for their second houses, 45%. However, unlike with first houses where 11% had paid rents of over 5,000/- p.m. no interviewees had paid over 5,000/- p.m. for second houses,

In Riruta Satelite, 72% of interviewees had paid rents ranging between 2,000/- p.m. and 5,000/- p.m. for their second houses compared to only 19.8% who had paid over 5,000/- p.m. for second houses as had been the case of 6.6% in first houses.

Reasons for Mobility (11)

The reasons given by households for having moved out of their second houses are shown in Table 4.25. Like was the case with first houses that had been occupied by interviewees, the reasons are given as a percentage of the number of households who gave them as reasons for moving with respect to the number of households who had moved from their second houses in each case study.

It was observed that the roles played by different factors as stimulants of movements had changed in importance.

Area	Inde-pendence	Marriage	Change of employment	bought/ built house	small house	dislike neighbour-hood	distance	high rent	security	others
Lavington	0	20	30	20	10	20	0	0	0	-
Kilimani	0	0	40	30	30	0	0	0	0	-
Parklands	8	23	15	31	0	8	15	0	0	0
Eastleigh	14	29	14	29	0	0	0	14	0	0
Buruburu	5	10	5	20	35	5	5	10	0	5
Umoja	0	31	6	31	25	6	0	0	0	0
Otiende	0	12.5	37.5	37.5	0	12.5	0	0	0	0
Kibera	0	0	0	0	0	0	0	33	67	0
Plainsview	0	18	9	46	0	0	9	9	0	9
Satelite	0	0	0	75	25	0	0	0	0	0

Table 4.25 Reasons for second moves

Source: Field Survey

Independence which had accounted for a large number of movements from first houses had ceased being an important stimulant of movements from second houses and had only stimulated movements from second houses for residents of only 3 case studies namely Parklands, Eastleigh and Buruburu and a very low influence rate of 8, 14 and 5% respectively. This was notably low considering that independence had been responsible for movements from first houses for interviewees in all the case studies and at relatively higher rates. Unlike in first houses where independence related movements had involved moving out of parents/relatives houses, independence related movements from second houses had involved moving out of shared houses.

Marriage had remained an important stimulant of movement even from second houses having stimulated movement for interviewees in all but three of the study areas where residents had occupied and moved out of second houses. The highest number of movements from second houses influenced by marriage had been 33% for households now living in Plainsview Estate.

Unlike in movements from first houses where marriage related movements had involved moving out of parents houses, as was the case in independence related movements, for second houses had involved moving out of shared houses with the exception of only 3 cases, 2 in

Parklands area and one in Plainsview Estate. Change of employment was slightly more influential in second movements than it was with first movements. It influenced the highest number of second moves for residents now living in Lavington, Kilimani and Otiende at the rate of 30, 40 and 37.5% respectively. In all other areas where interviewees had had at least two moves, change of employment had influenced movements but at lower rates only with the exception of Kibera and Riruta Satelite where no residents had moved out of their second houses for job related reasons. As was the case with first movements, job-related movements involved moving out of jobs where housing facilities had been provided or into jobs where housing facilities were provided.

With respect to second movements, home ownership had been the most important influencing or stimulating factor. In 6 out of the 10 study areas where households studied had moved from at least 2 houses, home ownership had been the highest influencing factor with an influence rate of 31% in Parklands, 29% in Eastleigh, 31% in Umoja, 37.5% in Otiende, 46% in Plainsview and an overwhelming 75% in Riruta Satelite. In the remaining 4 areas, home ownership was the second most important influencing factor in all the areas with the exception of Kibera, the only area where home ownership had not influenced any second movements.

Households who had moved out of their second houses due to inadequate space were found in Lavington 19%, Kilimani 30%, Buruburu 35%, Umoja 25% and Riruta Satelite 25%. The influence of size of house as a mobility factor with respect to second houses had been as important as had been in first houses. However, apart from residents now in these above mentioned areas, house sizes had not stimulated movements in any of the other areas.

The less important mobility factors in second houses had included dislike of neighbourhood which had influenced only few movements in residents now livings in Lavington, Parklands, Buruburu, Umoja and Otiende with Lavington leading with only 20% and the others being insignificantly low. Distance and high rent had stimulated movements in 3 areas each and at very low rates except for high rent which had been responsible for 33% of second movements for sampled households now living in Kibera where security reasons had been the most important mobility factor accounting for 67% of second movements. However, in no other study area had residents moved from second houses for security reasons. 5% of households now living in Buruburu and 9% of residents now living in Plainsview who had moved at least twice had done so due to poor relationship with the landlord.

Moves caused by reasons of parents moving or divorces did not feature with respect to second houses occupied and moved out of by households studied.

Unlike in the first houses where there were several incidents of occupation of parental houses, relatives houses and shared tenancies, tenure type in second houses indicated a trend towards independent household formation rather than continuing within the parents', relatives or shared accommodation. Out of the 102 households studied who had at least moved out of second houses, the tenure tupes in the second houses had been 5% of the households living with parents/ relatives, 7% living in employer housing, 18% in shared tenancies and the remaining 70% had occupied single-household tenancies.

In the analysis for second moves, home ownership, marriage and house sizes are the main reasons for the moves. Distance to work also features as a mobility factor. Although in these moves affordability (home ownership) and distance to work are important mobility stimulants, their importance does not over-ride other factors. This analysis conforms the hypothesis which appreciates that distance to work and affordability play a role in residential choices but also assets that other socio-economic factors also play an important role.

Third Houses Occupied and Vacated

There were only a handful of the households studied who had occupied and moved out of a 3rd house before moving into where they were living at the time of the study. Out of the eleven (11) case studies, 4 of them had no incidents of households having occupied a 3rd house before the current one. The areas that had had no incidents of 3rd moves are Umoja, Kawangware (this area had had no 2nd moves either), Kibera and Riruta Satelite.

Table 4.26 The Incidences of 3rd Moves as Percentages of the Households Studied Had Been:

Area	Percentage
Lavington	20
Kilimani	15
Parklands	15
Eastleigh	10
Buruburu	17
Otiende	5
Plainsview	5

Source: Own Field Survey 1987/88

Although the locations of these 3rd houses had been diverse, it was observed that households now living in Lavington had had their 3rd houses located in other high income residential areas such as Westlands and Upper Hill areas. For those households in Eastleigh, their 3rd houses had been located in the same area, that is, they had moved houses within the same area. For all these households, maisonnettes had been the dominant house type occupied in 3rd houses. Indeed, 80% of these 3rd houses had been maisonnettes, with the remaining 20% being either flats, semi-detached bungalow or servant quarter.

Table: 4.27 Rents in 3rd Houses

Area	No Rent	Less or 1000	1000-2000	2001-3000	3001-4000
Lavington	25	0	0	25	50
Kilimani	23	0	67	0	0
Parklands	0	0	33	33	33
Eastleigh	0	0	100	0	0
Buruburu	0	20	60	0	20
Otiende	100	0	0	0	0
Plainsview	100	0	0	0	0

Source: Own Field Survey 1987/88

Incidents of non rent payment were higher for 3rd houses occupied than had been with 2nd houses. All cases of non-rent payment for 3rd houses had involved employer provided housing. There had been only one case of rent being below 1,000/- p.m. (in Buruburu). This had involved occupation of a servant's quarter by a single person household. Unlike in previous houses occupied, there had been no incidents of rents exceeding 4,000/- p.m. for 3rd houses that interviewees had occupied.

With respect to tenure types in 3rd houses, 21% of the houses had been employer provided, 5% shared tenancy and the remaining 74% single tenancies.

Reasons for Mobility (111)

There were only a few factors that had led to households moving out of their 3rd houses. These factors and their contribution as a percentage of all 3rd moves are shown below.

Table 4.28 Reasons for 3rd Moves

Factor	Contribution
Home Ownership	58%
Change of Employment	26%
Small House	5%
Neighbourhood	11%

Source: Own Field Survey 1987/88

It was observed that most of the factors that had stimulated 1st and 2nd moves had not influenced 3rd moves. These factors include marriage, independence, distance, high rents etc, even the roles played by size of house and poor neighbourhood were very insignificant as stimulants of 3rd moves. This factor could be explained by the fact that by the time households made their 3rd moves, they were already married and that during their first and second moves they had moved into houses offering adequate accommodation and located in what was appropriate neighbourhood to the respective household.

Home ownership was the most influencing factor for third moves. This could be explained by the fact that by the time the household was ready to move a third time, they were also financially ready to own a home and also that after having moved twice before for other reasons, they had made an appropriate choice of house hence movement could only be occasioned by home ownership or job changes.

The main notable feature with respect to third movements is that they had been experienced only by households residing in middle to high income residential areas. Households now living in Lavington, a high income residential area, had had the highest incidents of 3rd moves, while very low income areas such as Kawangware had no residents who had

experienced even 2nd moves.

The analysis for third moves would tend to contradict the hypothesis and give the impression that indeed, distance to work and home ownership are the most important stimulants of residential mobility. However, it must be noted that these households in question have already moved twice before. They have made two moves in responses to stimulants that did not necessarily include distance to work or affordability. Reasons for the first and second moves are the most important in that they are basic. In addition, change of employment implies increase in distance, total change of working area or in some cases, surrender of employer provided housing. Hence from this analysis, it can confidently be asserted that distance to work and affordability are important but secondary stimulants of mobility.

Current Houses

In order to find out what households value in their housing, they were asked their reasons for moving into their current houses. A number of reasons were put down from which correspondents were required to note, in order of preference, which ones had influenced them to move into their current houses. It was observed that although respondents were required to note all the reasons that had led them to move into their houses, several households noted

only one reason. Even where an interviewee gave more than one reason as having influenced them to move into that house, they stressed that the first reason was the only one of great importance and that the other one or two given were only of secondary importance and were merely supporting but not determining factors.

For the purpose of this study, only the first three priorities given by households will be considered, it should however be noted that only a few households gave upto 3 priorities and hardly any gave more than this number.

Table 4.29 shows which reasons were given as 1st, 2nd and 3rd priorities by households in each study area. In order to paint a clear picture, the frequencies are given as percentages of the total number of respondents who gave one, two or three priorities respectively. The reasons from which the households were required to choose from are

a) Close to work place
b) Close to children's schools
c) Close to hospitals
d) House is bigger
e) Rent is reasonable
f) Neighbourhood is quiet
g) Neighbourhood is clean
h) Compound is large
1) Others (respondent to specify).

Table 4.30 First Priority Reasons

Area	Reasons a	b	c	d	e	f	g	h	i	Total 100%
Lavington	5	0	0	20	0	35	15	0	25	
Kilimani	0	15	0	45	0	5	5	0	30	
Parklands	10	0	0	30	10	25	0	0	25	
Eastleigh	25	0	0	40	20	0	0	0	15	
Buruburu	10	3	0	40	30	0	0	0	14	
Umoja	3	7	0	50	23	0	0	0	17	
Otiende	0	0	0	10	60	5	0	0	25	
Kibera	5	0	0	10	60	0	0	0	25	
Plainsview	50	5	0	10	10	0	0	0	25	
Satelite	20	5	0	20	20	15	0	0	20	
Kawangware	0	0	0	10	55	0	0	0	35	

Source: Own Field Survey

Table 4.31 Second Priorty Reasons

Area	Reasons								
	a	b	c	d	e	f	g	h	i
Lavington	0	7	0	0	7	32	40	7	7
Kilimani	6	6	0	6	6	70	6	0	0
Parklands	6	12	0	12	12	31	25	0	0
Eastleigh	8	15	0	15	53	8	0	0	0
Buruburu	17	4	0	17	33	13	4	8	4
Umoja	0	15	0	15	38	31	0	0	0
Otiende	0	0	0	20	60	0	10	10	0
Kibera	86	0	0	0	14	0	0	0	0
Plainsview	20	40	0	13	20	7	0	0	0
Satelite	8	8	8	15	31	15	15	0	0
Kawangware	45	0	0	27	18	0	0	0	9

Source: Field Survey

Table 4.32 Third Priorty Reasons

Area	Reasons								
	a	b	c	d	e	f	g	h	i
Lavington	8	0	0	8	0	25	25	8	25
Kilimani	0	12	0	6	0	12	56	6	6
Parklands	13	0	0	13	7	13	40	30	0
Eastleigh	20	0	0	0	40	0	0	0	40
Buruburu	0	14	0	14	0	36	21	14	0
Umoja	0	0	0	0	33	33	0	0	33
Otiende	0	0	0	0	0	0	29	71	0
Kibera	-	-	-	-	-	-	-	-	-
Plainsview	9	9	0	9	0	36	9	0	27
Satelite	0	0	0	43	14	14	0	0	29
Kawangware	0	0	100	0	0	0	0	0	0

Source: Field Survey

The reasons given for housing choice can be divided into four broad categories namely:-

i) Dwelling: Under this category are such factors as size of house, its types i.e. maisonnettes, flat etc, size of compound, internal amenities.

ii) Neighbourhood: This factor includes cleanliness of neighbourhood, noise or lack of it, amenities provided within the neighbourhood, security etc.

iii) Economic: This category covers the financial or affordability factors e.g. of rent or price of house or land on which to construct.

iv) Tenure: This is movement stimulated by change of tenure e.g. from rental to owner occupied housing, from rental to employer provided housing etc.

As earlier stated, the reasons given as first priorities are of great importance in their role as housing choice determinants. With respect to these first priority factors, it is clear from the table that factors related to the dwelling and economic factors played the greater role.

In all but one of the areas studied, a single reason dominated the factors that affected housing choice of most households, i.e. one single factor influencing more

households in housing choice than any of the other factors given. However, in almost half of the areas studied, the greatest number of households studied gave size of house as having influenced them more than any other factors to move into that house, in areas such as Kilimani, Eastleigh, Buruburu and Umoja, bigger house sizes had influenced below 40-50% of movements into the houses occupied by respondents. In another 4 out of the 11 areas studied, economic factors such as affordable rents, prices of houses or land had been the greatest determinants of housing choice. In areas such as Otiende, Kibera and Kawangware, economic reasons had influenced more than 50% of movements into current houses.

Lavington and Plainsview case studies are the only ones which exhibited unique characteristics with respect to dominant reasons of housing choice. In Lavington, the highest percentage (50%) had chosen their houses due to neighbourhood reasons, i.e. because the neighbourhood was quiet and clean while in Plainsview 50% of respondents had moved into their houses because of their houses' closeness to their work places.

In all the areas studied, no household had chosen their house because it was close to hospital or because of a larger compound. With the exception of Lavington and Parklands, neighbourhood or locality factors had hardly

influenced housing choice decisions elsewhere.

Under the reasons given in (i) i.e. others, the most dominant reasons given as having influenced housing choice are employer housing and affordable house price or affordability of land and construction. In all the areas apart from Lavington, Kilimani, Parklands and Plainsview, the reasons given under (i) were of economic nature i.e. affordable house, affordable plot and construction in that area cheap (this reason was given in Kibera, Satelite, Kawangware and Eastleigh). In Lavington, Kilimani, Parklands and Plainsview, reasons given under (i) were tenure related in that they all involved employer provided housing.

With respect to second priority reasons, economic related factors were still dominant as well as dwelling size factors. However, more households gave locality and distance to work factors as having influenced housing choice but at secondary rate. Distance to hospital was still relatively insignificant as a housing choice factor. It was observed that households in Kilimani and Parklands who had given bigger dwelling size as their first priority gave locality or neighbourhood reasons as their second priority. In Lavington, neighbourhood factors were still dominant even at secondary level. In Kibera and Kawangware, distance

to work was of overwhelming importance as a second determinant factor.

In Lavington, the secondary and third priority reasons given under (i) are good housing design while in all the other areas, the (i) reasons in 2nd and 3rd priorities are still largely economical or financial as was the case in first priority reasons.

None of the households interviewed in Kibera gave more than two reasons that influenced their housing choice, while in Kawangware, the third most important reason why households had moved there had been due to the areas closeness to hospitals or medical facilities.

In Lavington, Kilimani, Parklands, Buruburu and Plainsview, locality factors were the most important 3rd determinants of housing choice. In Eastleigh, economic factors dominated 3rd place in priority while in Otiende larger compound sizes were dominant.

There are some observation to be made with respect to housing choice factors. It was observed that while middle to high income households gave more reasons for their housing choices, fewer lower income households gave second or even third housing choice determinant factors. It was also observed that the reasons given were also related

to a households income level and that while lower income households reasons were mainly of a basic type, those of upper income households were largely non-basic. This fact can be illustrated by the fact that while for Lavington (high income area) households locality was the main first-priority housing choice reason. In Kibera and Kawangware (very low income areas), housing affordability was the most important housing choice determinant. In middle income housing areas such as Buruburu, dwelling sizes were of great importance. Next to economic factors, distance to work was also a very important housing choice determinant for low income households. Distance with relation to work places and hospitals is also an economic factor because the further one is from work or medical facilities, the more expensive travelling to these places is, hence housing choice factors for low income households are almost entirely economic related.

For most households, first priority housing choice factors were basic and reasons given drifted towards being non-basic with the more reasons given.

In this analysis for reasons for choice of current houses and areas, respondents revealed that the most important consideration related to dwelling aspects of the houses followed by economic factors and distance in

that order. It is more important to households that the size of the housing unit be adequate and the proper type for each individual household. It is less important that the house be located near their place of work. However, once a housing unit fulfils the dwelling requirements of households and is affordable, only then is it preferable if it is near their place of work. Hence, distance still plays a secondary role in housing choice while the role played by affordability is more important than distance. However, households would be more prepared to pay a bit more for a unit that meets their individual dwelling requirements. This analysis like the previous one further confirms the hypothesis.

Community Facilities and Social Amenities in Case Studies

Most of the case studies were served by several facilities and amenities in the establishment of the estates either within the estates themselves or in close proximity to them.

All the areas studied were adequately provided with shopping facilities with the only differences accruing in the sizes of the shopping facilities and the type of goods stocked. Study areas such as Kibera, Riruta and Kawangware were well provided with small grocery shops and

open air markets. On the other hand, areas such as Lavington, Kilimani, Parklands had in addition, to small shops within the estates, large self-selection stores at the main shopping centres. Households studied in these three areas said that they did almost all their shopping within the estates since the estate stores had adequate provisions.

In Buruburu, Otiende and Plainsview, almost all the households studied said that they did their main shopping in the city since the estate stores were not adequately provided but they also all said that they shopped for their daily necessities within the estates. Residents in Kibera, Riruta, Kawangware said that they did all their shopping within their residential areas and did not need to shop in the major chain stores in town while in Umoja and Eastleigh 35% of respondents in each case said they did their shopping in town and only shopped for basic necessities within the estate. The remaining 65% bought all they needed from within the estates.

All the areas studied were provided with at least a dispensary or health centre which are owned and operated by the Nairobi City Commission. Most of the areas were also served by privately operated clinics. While all the residents in Kibera and Kawangware utilised the government owned dispensaries for all their health problems and only attended larger government hospitals for severe ailments,

those in Lavington, Kilimani and Parklands used the large private hospitals within Nairobi or saw private doctors in the city for less serious ailments. In Buruburu, Plainsview and Eastleigh all the households interviewed said that they visited private doctors either within the estates or in the city but went to private hospitals for treatment of serious ailments. In Umoja and Riruta Satelite, all the residents interviewed said they visited either the government owned dispensaries, private doctors or hospitals according to the seriousness of their ailments.

All the study areas were also served by nursery, primary and in a few cases such as Buruburu, Parklands, Riruta Satelite, a secondary school within the area. Lavington also had primary schools which had secondary school wings. It was observed that for residents of Kilimani, Lavington and Parklands, all the households interviewed had their children attending either nursery or primary schools within the estates. It was observed also that these areas were served by schools which were much more expensively charged compared to those in other case studies.

In Buruburu and Otiende, 60% of nursery school children and 45% of primary schools attended schools within the estates while the rest attended schools either

in the city or located in other areas such as Westlands, Parklands, Lavington etc. It was noted that the schools attended outside these estates were more expensive than those within the estates. In Kawangware and Kibera children in all the households studied attended both nursery and primary schools within or around these areas. In Eastleigh and Umoja, 85% of households studied had their children attending schools within these estates and only 15% had children attending schools either in the city or in other residential areas.

In all the areas studied where there were secondary school going children over 80% of these children attended schools either in other parts of the city or outside the city, this was with the exception of Lavington, Parklands and Eastleigh which had 20, 25 and 18% of households with secondary school children attending schools within the estates.

With respect to transport means, all the areas studied were served by public means namely, buses and minibuses ('Matatus'). In addition, Buruburu, Kibera and Umoja were also served by a commuter train service. The time taken to travel to the city in these means varied between 20 to 40 minutes but households who used private means (cars) took time ranging between 15 to 35 minutes to get to the

The number of households using private cars as a means of transport is as per the table 4.33 shown in the next page.

Table 4.33 Number of Households Using Private Cars As a Means of Transport

Area	Percentage of Respondents Using Cars
Lavington	95
Kilimani	70
Parklands	90
Eastleigh	50
Buruburu	50
Umoja	65
Otiende	40
Kibera	10
Plainsview	80
Satelite	40
Kawangware	5

Source : Own Field Survey 1987/88

Even where respondents said that they used private means of transport, in very few cases was this exclusive. In most cases households admitted that they also used public means occasionally. In areas such as Kibera and Kawangware where use of public means was almost exclusive, there were complaints of inadequacy or inadequate provision of these means by residents.

All these areas studied, are adequately provided with religious facilities. In all the areas studied, there was at least a place of worship for each denomination found in the area, indeed, religious facilities were the only ones that were adequately provided in all the case study areas.

Open spaces and playgrounds were either inadequately provided or even not provided at all in almost all the study areas. In very low income areas such as Kibera and Kawangware, open spaces were non-existent. However, parking spaces were provided in almost all the areas with the exception of Kawangware, Eastleigh and the unplanned parts of Kibera.

Almost all the households studied agreed that provision of shops within their estates was of utmost importance, this owed to the facts that there are many basic but perishable daily necessities that cannot be bought in

bulk. For households who did not own cars, it was observed that adequate provision of means with which to commute to work and other places was second in importance while provision of schools and hospitals took third and fourth places respectively. It was observed that even for households who owned cars, it was felt that there should be adequate nursery and primary schools within the neighbourhood owing to the tender ages of children who attend these schools.

Religious facilities within the neighbourhood ranked last in importance of facilities, however, respondents were of the opinion that these facilities should be provided within reasonable distance, respondents who did not own cars felt that religious facilities should be provided within walking distance.

On being asked whether they would move from their houses if their income increased, the number of households who answered on the affirmative in each case study were as shown in Table 4.34 below.

Out of the 240 households studied, 130 of them (57.5%) said they would move if their income increased. It was observed that Lavington had the lowest percentage of households who said that if their income increased they would move to different areas/houses, Kawangware on the other hand had the highest percentage of respondents who said that they

Table 4.34 Income Related Moving

Area	Percentage
Lavington	20
Kilimani	55
Parklands	30
Eastleigh	50
Buruburu	83
Umoja	67
Otiende	80
Kibera	50
Plainsview	40
Satelite	55
Kawangware	85

Source: Own Field Survey 1987/88

would move out if their income increased.

It was also observed that most of the respondents who said that they would not move out if their income increased were either owner occupiers (owned the houses that

they occupied) or they were those occupying employer provided houses. For those who said that they would move if their income increased, they were given the following reasons from which to choose the one/ones that they would be concerned with in moving.

a) To be closer to place of work
b) To get better neighbours
c) To get quieter neighbours
d) To get cleaner neighbourhood
e) To be closer to schools, hospitals, churches, shops
f) To go outside the town
g) To get bigger house
h) To get smaller house
i) To pay lower rent
j) To get better designed house
k) Others (specify).

Having been given the above list to choose from, it was however observed that on average, households gave only two factors (first and second priorities) that would be of concern if they were to move on account of an increased income.

The number of households who gave each reason is shown in the Tables 4.35 and 4.36 in the next page (first and second priority tables). It should be noted that numbers in the first priority tables are given as percentages of those who said they would move on account of an income increase in each study area, while those in the second priority table are given as percentages of those who gave more than one reason in each study area, these figures are, therefore, not percentages of the total number of households studied in each area.

NB. 1. Reasons 'bcd' are grouped together because they all relate to the neighbourhood.

2. Reason given under 'k' was 'to buy/build a house'

From the first priority table, it is clear that most households who said that they would move if their income increased would be concerned with getting bigger houses or large accommodation. This implies that although households may be dissatisfied with the inadequate dwelling space provided in their current houses, they continue to reside there because that is all they can afford. They would, however, move out to larger houses if their income could allow it.

Table 4.35 Income related movements

Area	1st Priority Reasons								
	a	bcd	e	f	g	h	i	j	k
Lavington	0	0	0	0	25	0	0	0	75
Kilimani	0	0	9	0	36	0	0	0	55
Parklands	0	0	0	17	17	0	0	0	66
Eastleigh	0	60	0	0	0	0	0	0	40
Buruburu	12	8	0	12	57	0	0	4	8
Umoja	0	5	0	10	75	0	0	10	0
Otiende	25	0	19	12	25	0	0	0	19
Kibera	0	50	0	0	50	0	0	0	0
Plainsview	0	0	0	0	0	0	0	0	100
Satelite	27	18	0	0	55	0	0	0	0
Kawangware	0	41	0	0	47	0	0	12	0

Source: Field Survey

Table 4.36

Area	2nd Priority Reasons								
	a	bcd	e	f	g	h	i	j	k
Lavington	0	0	0	0	100	0	0	0	0
Kilimani	0	0	0	37.5	12.5	0	0	25	25
Parklands	0	0	0	0	60	0	0	20	20
Eastleigh	0	0	25	0	0	0	0	75	0
Buruburu	5	5	10	5	14	0	10	52	0
Umoja	0	0	0	11	18	0	0	71	0
Otiende	9	0	18	9	9	0	0	55	0
Kibera	0	42	0	0	29	0	29	0	0
Satelite	0	27	18	0	0	18	0	36	0
Kawangware	0	0	0	0	36	0	0	64	0

Source: Field Survey

For those households in Lavington, Kilimani and Parklands who would move out if their income increased, majority of them would be concerned with home ownership, i.e. they would want to move into owner-occupied houses. This reason was also given by the entire number of households in Plainsview study area who said that they would move. For households in Eastleigh, Kibera and Kawangware, 60, 50 and 41% respectively of the households who would move if their income increased would be concerned with acquiring a better neighbourhood either in terms of less noise, better neighbours or a cleaner neighbourhood.

On a first priority basis, none of the households studied said they would move into smaller houses or would move out so as to pay lower rent (h and i) and only a handful would be concerned with better designed houses or to be closer to work, schools, hospitals, churches or shops (reasons; a and e). An insignificantly low number of respondents said they would move outside town, i.e. move out of the estates into the less congested peripheral residential areas if their income increased.

With respect to the second priorities reasons, a better designed house would be the second most important sideration for those households who would move out on con- account of an income rise. Only households in Kibera and

Lavington would not be concerned about house designs. It can correctly be assumed that for Kibera households, a better house design would be too luxurious a consideration. For those in Lavington, their house designs are already good enough and hence as a second priority all the Lavington households who gave more than one reason for an income related move said they would be concerned about getting bigger houses. Kibera, better neighbourhood would be the main consideration. After better house design the second most important second priority reason is bigger houses. None of the other reasons would be significant as an income related factor of movement.

Besides income increase, the households studied were asked if there were any other circumstances under which they would change their residences. The options below are provided for the respondents to choose applicable circumstances from:

a) Change of marital status

b) Change of work place

c) Change of school places

d) Change of transport mode

e) Advancement of children's ages

f) Old age.

There were however few households who said that under no circumstances would they move. The number of these households as a percentage of all the households studied in each area were as shown in the table below.

Table 4.37 Percentage of Households That Would Not Move

Area	Percentage
Lavington	40
Kilimani	10
Parklands	40
Eastleigh	30
Kibera	20
Plainsview	10
Satelite	25
Kawangware	10

Source: Own Field Surver 1987/88

As was the case with income increase reasons of moving, these movements are also related with tenure types,

most of the above households (those who would not move) are largely either owner occupiers or those who were born in that particular area as was the case with the households in Kawangware, Kibera and Eastleigh in these areas, there were resipondent who were born there and felt that that was the only home they knew, the larget percentage of such cases was however found in Parklands.

In Buruburu, Otiende and Umoja study area, all the households studied had other reasons besides increase in income that would make them change their residences.

From the list of circumstances given for respondents to choose from, it was observed that households chose only one or two reasons that would make them move. The table in the next page represents this information and gives the number of households who gave each reason as a percentage of all those who gave other reasons (besides income increase) that would make them move. This is irrespective of whether the reason was given in singular or together with another, i.e. the number of those who gave each reason is a percentage of all those who responded positvely to that particular question. The reason for this is simply that a household would still move for either of the factors given since the factors are not dependent upon each other.

The analysis of whether respondents would move if their income increased portrayed the relationship that exists between dwelling attributes of housing units and affordability. An increase in income was seen by respondents as a means to acquiring their ultimate requirements in housing needs. To households, therefore, dwelling attributes of housing units and areas are the most important requirements and consideration in choice. However, affordability facilitates or hinders the realisation of these needs hence the interdependence of the two factors. This factor is further asserted by the observation that most households who would move as a result of income increase are in the low to middle income housing areas. The assertion of the hypothesis is therefore finally confirmed by this analysis.

Table 4.38 Other Circumstances for Moving

Area	Reasons					
	a	b	c	d	e	f
Lavington	17	92	0	0	0	8
Kilimani	0	67	0	0	0	78
Parklands	25	67	0	0	0	33
Eastleigh	36	79	0	0	0	57
Buruburu	67	43	6.7	0	36.7	66.7
Umoja	0	3	0	0	63	83
Otiende	0	40	0	0	0	80
Kibera	0	69	0	0	0	100
Plainsview	0	56	0	0	0	72
Satelite	17	83	0	0	11	11
Kawangware	20	67	0	0	0	53

Source: Own Field Study 1987/88

The most obvious feature of this table is the overwhelming importance of reasons (b) and (f) namely change of work place and old age as circumstances that would lead households to move from their residences. These two factors are almost equal in their importance as circumstances of residential changes, each one of them would lead to change of residence by a great majority of eight (8) of the eleven (11) areas studied. Change of mode of transport would not cause any household studied to change their residences while change of school place would influence a mere 6.7% of all households studied in Buruburu. Advancement of children's ages would cause residential changes in 36.7% and 63% of households studied in Buruburu and Umoja respectively. Change of marital status would influence an insignificant number of households to move from their houses, with the highest influence being 36% in Eastleigh.

It was observed that the highest number of those who said they would move if their work places changed were those who were housed by their employers. The other category of these respondents were those either single person households or households where members were relatively young. Older families said they would not change residences because of change of work place of the household head.

an overwhelmingly larger number of respondents said they would move on attainment of old age and the consequent retirement from employment. This category included both tenants and owner-occupiers who, it is rightly assumed, would like to settle down in their rural homes when old.

SUMMARY

In summary it was found out that semi-detached and detached bungalows were the most common house types found in the study areas. Single rooms and few cases of 'Swahili type' houses were found in the very low income areas of Kawangware and Kibera. It was observed that while low density high income areas such as Lavington and Kilimani were characterised by small families, the high density low income areas had large family sizes. In most of the study areas, households were below 50 years of age. This was explained by the fact that most Kenyan African houeholds move to their rural homes on retirement.

Most of the household heads interviewed worked within Nairobi either in the city centre or industrial area. Those who worked outside Nairobi and commuted daily were those working in the nearby areas of Kiambu and Thika and

were owner-occupiers. Those household heads who worked and lived in other towns with the rest of the family living in Nairobi also owned the house.

The areas that had high incomes were also characterised by higher educational levels and high numbers of working wives compared to those areas that had low incomes. Cases where the household head lived in Nairobi alone while the rest of the family stayed in the rural areas was mainly found in the very low to low income areas.

With respect to racial/ethnic considerations in residential locations, it was found that certain races or ethnic groups were to be found in particular areas. For example, Whites were only found in the high income areas of Lavington and Kilimani and not in any other area. Asians comprised a significant 40% of the households studied in Parklands while Nubis were found only in Kibera and comprised 30% of the households studied. Boranas were also mainly found in Eastleigh (35%) and Kawangware (30%).

It should, however, be noted that this may not be a conscious decision by households to locate near people of their race or ethnic background. This condition may have been a result of implementation of land use policies based on racial segregation which were drawn up during the country's colonial era.

It was found that households who had not moved from their first houses were relatively younger or had been in Nairobi for shorter periods of time than those who had moved. It was also found that mobility rates were related to the incomes of households with higher income households having higher mobility and vice versa. In high to middle income households, mobility has direct relationship with period lived in Nairobi in that the longer these households had lived in Nairobi, the more times they had moved. In the low income areas, there was no relationship between period lived in Nairobi and mobility with respect to the first houses occupied by those who had at least made a move. The following observations were made:-

a) Rents were lower than current rents; tenure types were mainly tenancies with hardly any cases of owner-occupancy or employer housing.

b) The main reasons of movements from first houses had been independence, marriage and home ownership in that order. There were also job related movements. Distance and neighbourhood movements had also occured but at less significant numbers.

In second houses occupied, the observations were:-

a) Rents had been average i.e. neither too high nor too low. Most second houses had been in low income areas.

b) Main reasons for movement from second houses had been home ownership, independence, marriage, change of jobs and inadequate space in that order.

In third houses occupied and moved out of:-

a) Rents had not exceeded 4,000/- p.m. There were more cases of employer housing than in previous houses.

b) Main reasons for movements had been home ownership, change of jobs, small houses and neighbourhood.

In analysing what factors households value in their housing, the following observations were made:-

a) In almost all the areas, adequate size of house was the first priority. Only in high income households was neighbourhood factors

given first priority. Affordability of houses was more important to middle and low income households than to high income households.

b) Second priority considerations in housing choice were affordability, size of house, neighbourhood and distance to work factors in that order. House designs were only of consideration to high income households while distance to work mainly influenced middle and low income households.

c) Third priority reasons were few and generally involved non basic consideration e.g. neighbourhood.

The study areas were generally well served with basic facilities such as shops, schools and medical facilities. However, in low income areas, shcools and transport facilities were said to be inadequate. Religious facilities were also well provided while open spaces and playgrounds were non-existent in most areas or mis-used in others.

For those households who said they would move if their income increased, it was observed that:-

a) As first priority households who can afford it would like to buy or build their own houses while those who cannot would rent large houses.

b) On second priority, households would seek better house designs.

c) Those households who said they would not move were all owner-occupiers.

Besides income increase, households said they would move on account of retirement, change of work place and for fewer households, advancement of children's ages.

FOOTNOTES

1. Alonso William, Location and Land Use, Towards A General Theory of Land Rent. Harvard University Press, Cambridge (1964), P.18.

2. Evans, Allan W., Economics of Residential Location, MacMillan Press, London (1973), P.19 - 29.

3. Viririakis J., "Place of Residence and Place of Work". Ekistics; Reviews on the Problems and Science of Human Settlements; General Research Programme of The Athens Centre of Ekistics, Vol. 26 (1968), P. 140 - 141.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

In its objectives, the study set out to investigate what factors households take into account while making decisions with respect to housing choices. In addition, the study analysed socio-economic characteristics of households sampled in the eleven (11) selected localities in Nairobi with the aim of establishing firstly, whether households of different socio-economic status give priority to similar mobility rate and secondly, whether family ages and sizes, races and ethnicity affect residential location decisions.

The introductory part of this study reviews theories of land use patterns within urban areas with the aim of establishing to what extent, Nairobi's residential patterns as revealed by the field study, conform to these theories. This introductory part also attempts an analysis of the urban housing market with the aim of noting the role played by operations of the housing market with respect to housing allocation. It is in the second part of the study that data on socio-economic characteristics as well as dwelling characteristics of previous and present houses occupied by the sampled households is analysed in order to test the hypothesis proposed at the beginning of the study and to carry out the said aims of the study.

The study found that reasons that affect households' decisions in housing choices can be broadly categorised into:

i) Dwelling Factors:

This category includes size of house, its type, design, size of compound etc.

ii) Neighbourhood Factors:

Whether area is clean, quiet, secure and facilities therein or within access.

iii) Economic Factors:

Affordable rent or price of house or land on which to build.

iv) Tenure Factors:

Whether house is to be rented, owner-occupied or is employer provided.

v) Social Factors:

Social characteristics of the household such as ages of members, marital status, income level, etc.

The data analysed reveals that people are very much alike in their housing wants and that what these are depends on the stage that their household has reached. Many people of all socio-economic levels aspire to good quality housing

with a full complement of facilities. People also want more from their housing than simply physical amenities and are willing to forego some of these in order to achieve a satisfactory physical and social environment.

Having given the above categorisation of factors that were given by households as influencing their choice of residential location, the next question is whether these factors were accorded equal importance by all households. It was revealed that with respect to all income groups, independence, marriage and home-ownership in that order were the reasons that accounted for most first moves irrespective of socio-economic status of households.

In second moves, home-ownership, marriage and change of jobs were important for most households in that order while for third moves, home-ownership, change of jobs and neighbourhood factors were responsible for moves in that order of importance. However, for high income households, the third move had been stimulated by desire for better neighbourhood more than anything else.

In responding to the question of why households moved into their current houses, the difference in reasons given by households of different socio-economic status was apparent. Low and middle income households had moved into their houses because the houses provided adequate space while

high income households had done so because they liked the neighbourhood. As second priority reasons, low and middle income households had considered affordability and distance to work while higher income households considered design of house. Low income households only considered neighbourhood as a third priority factor and even then, it was the security factor of the neighbourhood unlike income households who considered neighbourhood factors such as lack of noise, cleanliness, etc.

It is, therefore, a contention of this study that the socio-economic status of a household influences the choice of residential location and that for low to middle income households, their desires are of a basic nature such as adequate space, affordable rent, reasonable distance to work while for higher income households, their desires in housing location are of relatively less basic nature, they include such factors as better neighbourhood and better house designs.

The study found that households of different socio-economic status are not equally mobile. In middle to high income households, those who had been in Nairobi for longer periods of time had moved more frequently than those who had not lived in Nairobi for long, hence there was a relationship between period lived in Nairobi and number of times that a

family had moved. However, for low income households, the level of residential mobilities was generally low regardless of period of time lived in Nairobi.

The study revealed that family ages influenced the choice of residential location. Young households were found to move for economic reasons which decline steadily with age. Dwelling reasons are important to the relatively young and the relatively old and neighbourhood reasons rise steadily with age. In addition, many households felt they would like to move or change houses as the ages of their family members advanced while many more desire to move on attainment of old age by the household head. However, no relationship was found between family size and choice of residential location.

The study found that racial and ethnic considerations cannot be ruled out in the choice of residential location in Nairobi. This was supported by the occurence of certain races or ethnic groups only in particular localities and not in any other areas. For example, Asian households were almost exclusively found to reside in Parklands locality where 40% of households studied were Asian origin; only a meagre 5% was found in Lavington and none in any other area. Whites were also found in the high income areas of Lavington and Kilimani. Nubis were also found only in Kibera while Borans were found only in Eastleigh and Kawangware. However, for

indigeneous Kenyans, there was no evidence of ethnic considerations in housing location choice.

In its attempt to establish whether Nairobi's residential patterns conform to traditional theories of location, it was found that Nairobi's residential pattern does not absolutely fit into any of these patterns. In Burgess' concentric zone theory, development of Nairobi's residential areas disturbs the zones proposed by Burgess while Hoyt's radial sector theory of filtering is rendered ineffective by operations of the housing market in Nairobi. In the case study, no household was found to have moved because their house was too old nor any that moved into their current house because it was newer than their previous one. In cases of owner occupation, owners will renovate their house instead of moving out and even in tenancy cases, the study revealed that factors other than age of house were responsible for movements. The analysis of the housing market also showed that the relationship between demand and supply of housing units in urban areas in Nairobi in particular renders filtering ineffective, hence a household will hold onto their house and will only move out when factors other than age necessitates

Hoyt's modified axial development theory emphasizes on the importance of transportation with respect to housing choice decision. In the case of Nairobi, this was dispelled

as the study has shown that distance and transportation are not critical determinants of location especially for high and some middle income households. The study also showed a tremendous desire for urban households to be located outside the city as children grow bigger and as household heads attain old age. This desire is fulfilled by locating further out of the city where transportation is not as good as nearer the city.

The trade-off theory of residential location which proposes that households locate at points of least cost relative to city centre by trading off travel costs which increase with distance from the city is also not very relevant in Nairobi households' location choice because the importance of travel costs is relatively unimportant compared to other factors that households consider.

Nairobi's residential location pattern is shown to have been greatly influenced by the zoning that was done during construction of the Kenya-Uganda railway where the best areas in terms of climate, soils, low densities and large plot sizes were reserved for Europeans and Asians in that order of priority. It was found that Africans who reside in areas such as Lavington, Kilimani and Parklands are those in the high income brackets. The areass that were reserved for Africans are now occupied by low income

African households while newer planned estates such as Otiende, Buruburu, Plainsview are occupied mainly by African households of middle income.

In the analysis of the urban housing market, it was shown that besides being a question of mere shelter, there are other attributes that are wound up with housing. These are privacy, relative location, environment amenities and investment. The desirability of a residence in the market is affected by such other factors as accessibility and costs of transportation to other urban locations among others. The role of the housing market can, therefore, not be ignored in that operations of the housing market are such that for each individual, his housing choices operate within a set of constraints rather than within a free choice setting. Housing supply is constrained by government policies, rate of building activity and operators of financial institutions which combine with such household factors as income to determine the household's capacity to translate housing desires into actual mobility.

Recommendations

The following is a summary of the recommendations of the study.

1. It is quite clear that many people see both prestige and social status in the achievement of owner occupation. However, the number of people who can achieve owner-occupation is limited by financial reasons but from the overwhelming number of people who said they would move if their income increased so as to own houses, it is apparent that most people aspire to be owner-occupiers. For this reason, it is recommended that more organisations should build houses with the aim of selling them to occupiers as opposed to the current tendency of government organisations such as local authorities developing houses to rent as opposed to those for sale.

2. Another dimension of hosuing preference is the distance of the home from the place of work as a function of the cost of the accommodation and of transport. There is an often heard assertion that low income households 'prefer' to live in areas which are close to potential jobs than in areas further from town and industrial area. It is the contention of this study that the fact that low income households are normally to be found near the city and industrial area cannot be referred to as preference for these areas. Low income households as revealed by the study also have other desires with respect to housing, however, these desires are rarely realised since the kind of housing

that would fulfil the desires is not within economic means of these households. Majority of the respondents in the samples who were of low income could choose to live far from town and pay for transport if rent were cheaper and also if the house had other desirable qualities. It is therefore recommended that low income housing schemes need not be established only within short distance of the city centre which gives them high densities due to unavailability of land close to the city and the high plot coverage allowed in these areas. Low income housing schemes can be established further out of the city to enable incorporation of other desirable housing attributes such as privacy and good neighbourhood factors. This would not necessarily increase the rents or prices of such houses since land would be cheaper further away from the city.

3. The study revealed that before marriage small houses are desired, however, due to lack of 'proper' small affordable units in the desired areas, young unmarried people are forced to share houses so that they are able to live in desired areas and yet not pay more than they can afford. For this reason, it is recommended that while planning housing estates, there is need to incorporate single-person houses along with larger houses for persons to live independently and yet would find it needless to rent the

3 or 4 bedroom houses which are typical in planned estates. Thus one is forced to share or live in inappropriate houses and moves out at the first opportunity. This case occurs with persons who are either single or married but with families living in rural homes while the household head lives alone in Nairobi.

4. The study found that adequate provision of space in a house is of great importance to households. this was revealed by the large number of households who had either moved out of previous houses due to the house being too small or who said they would move out if their income increased because their present houses are too small. However, what one household deems adequate may not be adequate to another family depending on cultural factors as well as household sizes. For this reason, it is recommended that housing developers should carry out feasibility studies to include the different sizes of houses that households desire, e.g. a household may find two large bedrooms more desirable than three small ones while another household may desire the reverse. Such considerations should be incorporated in housing developments. Households would also be willing to pay a bit more for a house whose design and size caters for their personal tastes.

5. Several households said they would move out on advancement of children's ages. This, it was found is because most African households find the typical planned estates house designs inappropriate for those with older children. This owes to the traditional or cultural beliefs about the distance that should be maintained between say a father and grown up daughters. This is one aspect that house designs completely ignore unless one is constructing their house as opposed to buying the already developed ones. It is, therefore, recommended that house designs should be such that they take into account this cultural aspect in peoples lives especially in the relationship of such rooms and bedrooms and bathrooms.

Areas of Further Research

Owing to limitations in time and finances, it was not possible to exhaust many issues relating to housing location. In addition, the topic of housing location is a broad one and cannot be exhausted in a single study like this one. The following fields are suggested as being viable for further research in this field:-

1. The issue of whether planners and designers of housing in Kenya currently take adequate account of the structure and needs of the types of families requiring

housing. A comparison of a planned neighbourhood and one that is not planned by a developer but occupied by households of similar socio-economic backgrounds to find out how a similar group of people would arrange their living spaces and environment.

2. An intensive study of choice of residential location with respect to households of one particular income group.

3. Relationship between traditional norms and urban class formation.

4. The role of government policies in the current residential patterns in any Kenyan urban area.

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APPENDICES

QUESTIONNAIRE

1. Area .....

2. House type: Maisonnete
   Flat
   Bungalow: Detached
   : Semi Detached
   Room : Detached
   : Semi detached

3. Interviewee: Owner-occupier
   : Tenant
   : Other (e.g. employer housing)

4. Family size .....

5. Ages of family members .....

6. How many members are working in Nairobi .....

7. How many members are working in other areas? .....

8. What areas are these .....
   .....
   .....

9. What are their occupations? .....
   .....
   .....
   .....

10. Do they commute daily from work to home?

.....

.....

11. What is the age of the household head?

.....

12. What is his/her education level?

Primary level
Secondary level
College level
University level
Postgraduate level

13. What is the income level of the household head?

Between Kshs. 0 - 1,000
1,001 - 2,000
2,001 - 3,000
3,001 - 4,000
4,001 - 5,000
5,001 - 6,000
6,001 - 7,000
7,001 - 8,000
8,001 - 9,000
9,001 -10,000
Over 10,000

14. What is the race of the household head?

African
Asian
European

15. If African, what is the tribe? .....

16. What is the place of work of the household head?
.....

17. If not in Nairobi, how far is this place from Nairobi? .....

18. What is the total family income

Between Kshs. 0 - 1,000
2,001 - 2,000
3,001 - 4,000
4,001 - 5,000
5,001 - 6,000
6,001 - 7,000
7,001 - 8,000
8,001 - 9,000
9,001 - 10,000
Over 10,000

19. How long have you been in Nairobi?

20. What areas have you lived in since coming to Nairobi?

.....

.....

.....

21. What was the type(s) of house(s) that you have previously occupied?

Maisonnete
Flat
Bungalow: detached
: semi-detached
Room : detached
: Semi-detached

22. What were the rents paid for these houses?

.....

.....

.....

23. What was the tenure type in these houses?

(a) Rental Alone
(b) Rental sharing
(c) Parents' house
(d) Owner occupied
(e) Others e.g. employer housing

House	Tenure Type
First	
Second	
Third	
Fourth	
Fifth	

24. What was your reason for moving from each of the houses?

(a) Size of house (too large)
(too small)
(b) Change of marital status - marriage
divorce
(c) Rent too high
(d) Bought your own house
(e) Bad Neighbours
(f) Poor transport means
(g) House too far from: Schools
hospital
place of work
shops

Others (specify)

House	Reasons for moving
1st house	.....
	.....
	.....
	.....
	.....
	.....
	.....
2nd house	.....
	.....
	.....
	.....
3rd house	.....
	.....
	.....
	.....
4th house	.....
	.....
	.....
	.....
	.....
5th house	.....
	.....
	.....
	.....

25. Why did you move into this house? (Please note in order of preference)

(a) Close to work place
(b) Close to children's schools
(c) Close to hospitals
(d) House is bigger
(e) Rent is reasonable
(f) Neighbourhood is clean
(g) Neighbourhood is larger
(h) Compound is larger
(i) Others (please specify)

26. Where do you get your basic necessities from? i.e. groceries, health facilities, schooling facilities etc.

27. How far are these places from your house?

(a) Facility .....
(b) Grocery stores .....
(c) Clinics/hospitals .....
(d) Schools .....
(e) Others .....

28. What mode of transportation is available in the neighbourhood?

(a) Bus
(b) Matatu
(c) Train
(d) Others .....

29. Which mode do you use?

(a) Car (private)
(b) Bus
(c) Matatu
(d) Train
(e) Others .....

30. How much time do you take to commute between home and place of work using:

(a) Bus .....
(b) Car .....
(c) Train .....
(d) Other .....

31. What other facilities are available in this area

(a) Schools
(b) Shops
(c) Open spaces
(d) Playgrounds
(e) Religious facilities
(f) Open spaces

32. How do you consider these facilities to be important to you? (i.e. list the available facilities in order of importance)

.....
.....
.....
.....
.....

33. In case of an increase in family income, would you change residence? Yes/no.

34. If yes, what would be the reasons for wanting to change residence?

(a) To be closer to place of work
(b) To get better neighbours
(c) To get quieter neighbours
(d) To get cleaner neighbours
(e) To be closer to schools, hospitals, churches shops.

(f) To go outside the town
(d) To get bigger house
(h) To get smaller house
(i) To pay lower rent
(j) To get better designed house
(k) Others (specify) .....

35. Please list them in order of priority.

.....

.....

.....

.....

.....

36. Besides income increase, under what other circumstances would you change your residence?

(a) Change of marital status
(b) Change of work place
(c) Change of school place
(d) Advancement of chidren's ages
(f) Old age